

Chilton's MOTOR AGE

TECHNOLOGY DEPT.

MARCH 1955

BUSINESS
GOING ON
AS USUAL
DURING
REPAIRS
~
ACME AUTO REPAIRS.

In This Issue:

NADA's Action Program

2 TOP PERFORMERS



① A FAST SEATING COMPRESSION RING

Combined in the same replacement ring set!

② A SOFT PRESSURE OIL RING

Walt White

① The Hastings torsional is a compression ring that seats right now. Its torsional action brings it into a quick seat and perfect wall bearing in any cylinder—tapered, out-of-round or re-bored.

② The Hastings Steel-Vent is an oil ring that stops oil-pumping immediately. It's a soft pressure ring with the light inner-spring developed by Hastings. It delivers the extra lubri-

cation that older engines must have—and with complete oil control and economy.

Here are two top performers in the same "Motor Engineered" set . . . built by replacement ring specialists.

You don't get come-backs due to cylinder scuffing and slow-seating when you install Hastings Steel-Vent sets. You get positive, quick performance that makes car owners happy.



HASTINGS MANUFACTURING COMPANY, HASTINGS, MICHIGAN • HASTINGS LTD., TORONTO
Piston Rings, Casite, Oil Filters, Spark Plugs

HASTINGS

* Tough on oil-pumping . . . Gentle on cylinder walls

STEEL-VENT PISTON RINGS Regular or Chrome-Faced

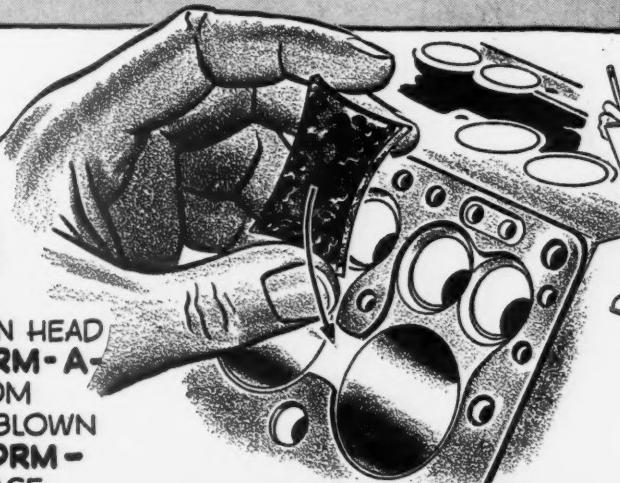
SERVICE TIPS

FROM
PERMATEX

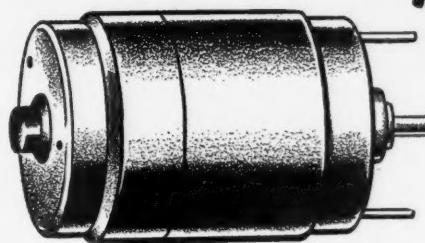


PATCHING HEAD GASKETS

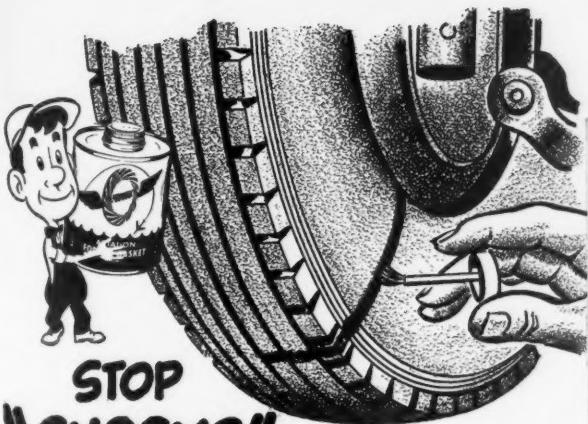
EMERGENCY REPAIRS FOR A BLOWN HEAD GASKET CAN BE MADE WITH **FORM-A-GASKET NO. 1**. CUT A PIECE FROM ANOTHER GASKET TO MATCH THE BLOWN SPOT. COAT GENEROUSLY WITH **FORM-A-GASKET NO. 1**. FIT INTO PLACE AND REASSEMBLE.



MOISTURE PROOFING FOR SEALED ELECTRIC MOTORS



ELECTRIC MOTORS OF THE SEALED TYPE CAN BE MADE MOISTURE-PROOF WHEN REASSEMBLED AFTER REPAIR BY COATING MOTOR AND SEALED FLANGES AND GASKETING ASSEMBLY JOINTS WITH **FORM-A-GASKET NO. 2**



STOP "SHOCKS" FROM PLASTIC SEAT COVERS

PAINT A NARROW BAND OF **FORM-A-GASKET NO. 3** FROM THE RIM OF ONE WHEEL TO THE CENTER OF THE TIRE TREAD. SPRAY WITH POWDERED GRAPHITE. FORMS A "GROUND" THAT ELIMINATES "SHOCK".

MORE THAN 50 CHEMICAL PRODUCTS
FOR BETTER AUTOMOTIVE MAINTENANCE



Form-A-Gasket withstands the enormous pressures of modern high-compression engines. It is unaffected by gasoline, hot or cold oil, grease and water, anti-freeze. Always say PERMATEX Form-A-Gasket when you order sealing compound.

EVERY SHOP NEEDS ALL THREE TYPES

- No. 1 — Sets quickly. Dries hard.
- No. 2 — Sets slowly. Remains pliable.
- No. 3 — Brushable. Sets to a paste. Remains tacky.

FORM-A-GASKET®

PERMATEX COMPANY, INC., BROOKLYN 35, N. Y. • KANSAS CITY 15, KAN.

INCREASING DEALER PROFITS EVERYWHERE!

The *Raybestos*

7 POINT BRAKE CHECK

This is the complete new Raybestos selling "package" that is pulling in the brake work

USE IT TO INCREASE YOUR BRAKE SERVICE BUSINESS



POWERFUL NATIONAL ADS like this one are urging car owners to get the Raybestos 7-Point Brake Check. Tie in with them. Let them increase your business, too. This new brake service profit plan is really moving the famous products shown at the right. Watch for these ads to run.

RAYBESTOS LINED SHOES "CONTOUR GROUND" A special process developed by Raybestos. The shoes are carefully ground for proper belly contact . . . inherent springiness of shoe assures correct contact at heel and toe. No spongy pedal action—no high spots.

RAYBESTOS PG SETS All Raybestos Brake Linings are Proving Ground Tested for greater highway safety. And only Raybestos linings are made by 7 different manufacturing processes to assure just the right combination for every make and model car.

→ GET WITH IT, DEALERS. THIS PLAN HAS REALLY GOT IT! (see your jobber for details)

Raybestos
AMERICA'S BIGGEST SELLING BRAKE LINING

1. Pull front wheels and inspect linings
2. Check brake drums
3. Inspect front wheel bearings
4. Clean brake assembly
5. Check hydraulic system
6. Adjust brakes
7. Road-test brakes

And with the Raybestos Plan you can charge for every check you make!



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.



RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks
Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber,
Engineered Plastic, and Sintered Metal Products • Rubber Covered
Equipment • Asbestos Textiles • Packings • Abrasive and Diamond
Wheels • Bowling Balls



Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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For THE AUTOMOTIVE SERVICE INDUSTRY

LXXIV, No. 4

March, 1955

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MOOG ANNOUNCES the most important piston ring development since chrome!

CHROME+PLUS®

Patent Pending

SEATS as fast as Cast-Iron

"Break-in Sheath" seats as early
as within 100 miles in engines
operating under average conditions!



8 YEARS OF RESEARCH...
A SOLID YEAR OF TESTING...
BACK THIS TOTALLY NEW IDEA
IN PISTON RINGS

Ordinary chrome rings resist wear. But they resist seating too.

Since 1946, Moog engineers have attacked this problem. We learned early that pre-seating at the factory was not enough. Only the engine itself can seat a ring properly and completely.

Now, at last, working with a leading metallurgist, we have developed what we believe to be the world's *fastest seating top chrome ring*—as indicated by a full year of laboratory and road tests!

Moog Chrome-Plus Piston Rings for passenger cars, trucks and tractors are produced exclusively by Moog under the  Process (patents pending).

For additional information, see your Moog Jobber
...or write Moog Industries, Inc., St. Louis 14, Mo.



the only piston ring with new revolutionary "Break-in Sheath"

PLUS WEAR of hard Chrome

Layer of solid chrome,
not scuffed during seating,
lasts up to 100,000 miles!

You've never seen anything like it for stopping comebacks after re-ring jobs due to oil-pumping, low gas mileage and loss of power!

How is this new Moog Chrome-Plus Piston Ring different?

Its dull "satin" finish is the "Break-in Sheath," a special metal with miraculous seating power plated over the shiny, hard, long-wearing chrome. Tests prove this "sheath" seats the ring in the engine (the only place where a ring can be properly "mated" to the cylinder wall) *as fast or faster than cast-iron!*

Because there's no scuffing of ring or cylinder wall during seating, the Moog

Chrome-Plus Piston Ring has *unbeatable lasting power!* Think what this means to operators of trucks and tractors!

For unexcelled piston ring performance on your next job—re-ring or rebore—try a set of Moog Chrome-Plus!

See the "Break-in Sheath" Demonstration

... at your Moog Jobber's. In 30 seconds you'll be convinced—Chrome-Plus is the most important piston ring development since chrome!



GHQ for Piston Rings
Coil Springs • Leaf Springs
Tie Rod Ends • Shackles
King Bolt Kits • Coil Action





Quality Control

**PUTS THE WORLD'S BEST
BEARINGS IN YOUR HAND
WHEN YOU SPECIFY
FEDERAL-MOGUL**

108 TESTS ASSURE QUALITY

Some types of our bearings get as many as 108 different inspections. These include visual, mechanical and special inspections, including analyses and temperature controls. Others may require only half that many tests to assure top quality. But, regardless of the bearing or bearing part you need, you can be sure of this:

If it comes to you in the red-and-black Federal-Mogul box, it's tops in quality and accuracy for the job it has to do!

**You can depend on your
Federal-Mogul Jobber!**

FEDERAL-MOGUL SERVICE

Division Federal-Mogul Corporation

DETROIT 13, MICHIGAN



"See For Yourself How



Nōkōrōde

UNDERCAR SEALER AND SILENCER

- ✓ **Sprays on Quicker**
- ✓ **Saves Time,
Trouble, Money!"**

50% More Undercoating Jobs from Every Drum

Check these facts, and you'll quickly see how Lion Nokorode Undercar Sealer and Silencer can build *extra* profits for you. Nokorode . . .

- Is sprayed on thinner ($\frac{1}{6}$ ")
- Dries faster
- Lasts longer
- Goes farther
- Is concentrated
- Is preferred by spray men, because both application and clean-up are easier
- Is guaranteed by Lion Oil Company

Made under the process of U. S. Patent No. 2393774, and made from start to finish by Lion Oil Company. Send for complete details NOW!

**LION OIL COMPANY
EL DORADO, ARKANSAS**



Lion Oil Company
Dept. MA-C
El Dorado, Arkansas

Please send me complete information about Lion Nokorode, and how it can increase underbody coating profits. No obligation, of course.

Name _____

Street _____

City _____ State _____



DELCO

Replace with Delco Original Equipment
Brake Service Parts—designed and
engineered to restore brake systems
to like-new operating efficiency



Attractively packaged, Delco Brake service parts are popular shelf items

DELCO LINED BRAKE SHOES

They're Looking for Better Brakes Sell them

BRAKE PRODUCTS

WHEEL CYLINDER REPAIR KIT



Contains all parts needed to restore a wheel cylinder to best possible operating condition.

MASTER CYLINDER REPAIR KIT



Contains every part necessary to put a master cylinder back in normal operating condition.

DELCO SUPER 11 BRAKE FLUID



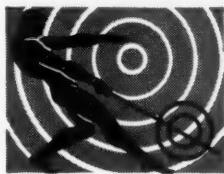
Delco Super 11 and Delco Super 9 brake fluids both exceed their respective S.A.E. specifications.

These original equipment service parts restore the braking efficiency your customers demand . . . give you the profit advantages of a huge pre-sold original equipment market.

Delco brake shoes are *brand-new shoes*, plated with Di-Chromate to seal out rust and lined with the same original equipment lining used on Cadillac, Buick, Oldsmobile and Pontiac. Delco lined brake shoes command the respect of service men and service customers everywhere.

Both Delco Super 11 heavy-duty brake fluid and Delco Super 9 moderate-duty brake fluid exceed their respective S.A.E. and U. S. Government performance standards, including operating ranges, stability, lubrication and corrosive effect on metals and rubber.

Delco brake fluids and lined brake shoes and repair kits for master and wheel cylinders are General Motors products—available through UMS distributors and GM car dealers everywhere.



**moraine
products**

MAKERS OF CHRYSLER MOTORS, DAYTON, OHIO

A GENERAL MOTORS PRODUCT



A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

TO THE TOP

B. A. STRANAHAN, PRESIDENT
F. D. STRANAHAN, TREASURER

CABLE ADDRESS,
"CHAMPION"

CHAMPION SPARK PLUG COMPANY

FELTHAM, ENGLAND — PARIS, FRANCE — WINDSOR, CANADA

March 1, 1955

Dear Champion Dealer:

Last month we talked about Champion's general advertising and the job it does for you. Now I'd like to tell you how specialized Champion advertisements protect your profits in the tremendous farm market.

The farmer is the largest individual user of spark plugs — representing about a quarter of the entire market! He operates nearly seven million cars and trucks, and drives each of his five million tractors the equivalent of 25,000 car-miles per year. He's quite a spark plug customer and surveys show Champions are his favorites by a wide margin.

We go after the farm business for you with the biggest, custom-tailored campaign of any automotive parts advertiser.

Because farmers are interested in what is happening on other farms throughout the country, we actually visit the most interesting farm operations in the nation, taking photographs and interviewing the owners about their farms and their experiences with Champion Spark Plugs. These stories and pictures are combined into advertisements which interest the farmer and are of actual professional value to him.

As a result, farmers are reading Champion advertisements — readership studies prove this — and the way is paved for increasing your share of this great farm market.

Sincerely,

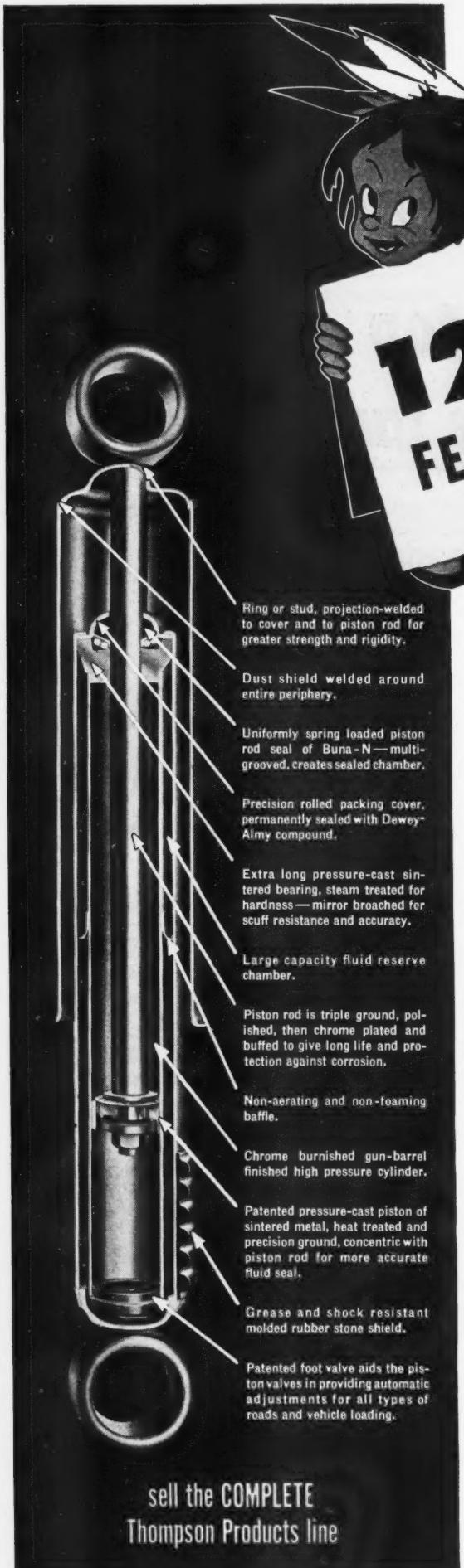


DEALERS

***IN THE
NATION***

Champion gives you top advertising support in the profitable farm market . . .

**appearing regularly in ... BETTER FARMING, FARM JOURNAL,
SUCCESSFUL FARMING, CAPPER'S FARMER, FARM AND RANCH,
PROGRESSIVE FARMER and HOARD'S DAIRYMAN!**



12 BIG FEATURES OF...

THOMPSON PRODUCTS' NEW

SKY-RIDE

Airplane Type

SHOCK ABSORBERS

JUST LOOK at all those features . . . many of them *exclusive* with Thompson's new SKY-RIDE airplane-type Shock Absorbers.

The average motorist, of course, may not understand the importance of these features as you do. But what he *will* understand is that he gets easier riding and easier driving with SKY-RIDES smoothing out the bumps in the road.

The new SKY-RIDE airplane-type Shock Absorbers, like the other parts in the fast-moving Thompson line, are good-markup, quick-turn-over items that build profits for you the year 'round . . . year in, year out.



See your
**Thompson
Products Jobber**

THOMPSON SERVICE SALES
2209 Ashland Road • Cleveland 3, Ohio

Hudson provides working-capital fund for every Hudson dealer . . . only plan of its kind anywhere!

Dealers share benefits starting with first 1955 cars shipped!

Every Hudson dealer, regardless of location or sales potential, is sharing right now in a unique new fund that builds new working capital for him.

New fund provides cash payments

This fund provides cash payments to Hudson dealers from the benefits and economies that come with volume. It starts with the very first '55 cars shipped, and builds *added* working capital for each Hudson dealer.

Hudson Franchise best in the industry

This new Dealer Volume Investment Fund is in addition to Hudson's big dealer discounts, and to area bonuses paid Hudson dealers regardless of volume. It is a new addition to attractive provisions already in the Hudson Franchise for:

. . . new-car price protection . . . rebates on previous models at new-model time . . . special allowances to protect against obsolete parts . . . 100 per cent recovery on tourist warranty labor . . .

and other Franchise features that make Hudson dealers truly full partners in a growing, rapidly developing new opportunity.

For further information, use the coupon below.

American Motors
Means
More for Americans
and More for
Hudson Dealers, Too!



Hudson Motors Division

American Motors Corporation • Detroit 32, Michigan

Attention:
Mr. N. K. VanDerzee,
Vice President in Charge of Sales

Please rush to me complete information about the new and unusual Hudson Dealer Volume Investment Fund and the liberal Dealer Franchise.

Name _____

Number and Street _____

City and State _____

Business _____ Position _____

MA 3



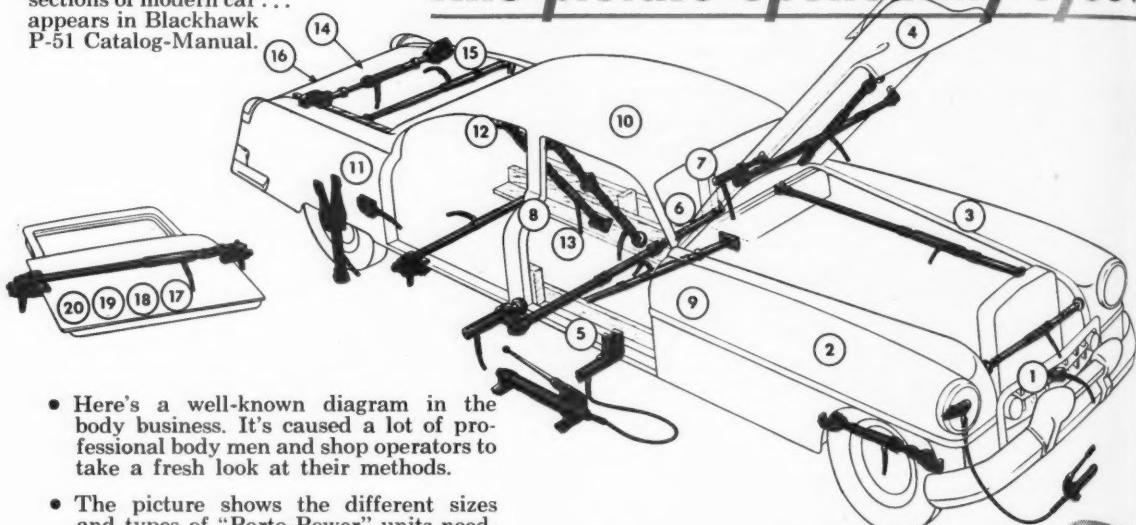
The most beautiful performers of them all

The dramatic Hudson line is new from stem to stern. It covers over 94% of entire new-car-market price brackets. Features: all-new Hornets, Wasps—and the unique Rambler, only car built to meet new driving conditions; the ideal second car and women's car; priced below the "low-price three."

Look at your

Is it up-to-date? Are you using obsolete methods?

Diagram of basic "Porto-Power" equipment used on 20 major sections of modern car . . . appears in Blackhawk P-51 Catalog-Manual.



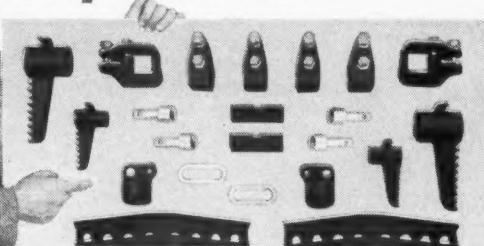
- Here's a well-known diagram in the body business. It's caused a lot of professional body men and shop operators to take a fresh look at their methods.
- The picture shows the different sizes and types of "Porto-Power" units needed to efficiently repair the 20 major body sections of a modern car.
- It's dramatic proof that it takes more than ONE size and type of hydraulic body jack to be competitive and make a profit on a modern car! You need a whole family of hydraulic tools today.

This picture opened my eyes!

Compact, lightweight Bantam "Porto-Power" for fast sheet metal repair . . . 10-ton "Porto-Power" for reinforced sections . . . rams that spread, pull or fit into tight spots . . . plus modern work attachments that push, pull, clamp and spread.

Suggested User net prices are subject to change without notice.

Do you have this?



NEW! MULTI-PURPOSE PULL CLAMPS — New techniques snap damaged metal back into position without stretching or distortion. Ask for Blackhawk "Pull Clamps" . . . AZ-12 ass't (\$46.70) for "Bantam" . . . FZ-13 ass't (\$51.80) for 10-ton "Porto-Power".

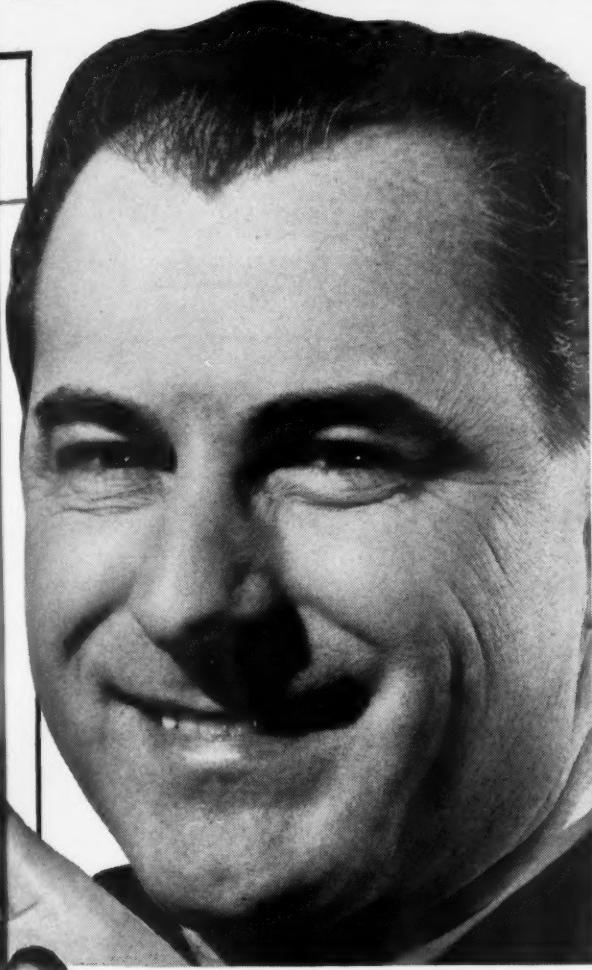
Do you have this?



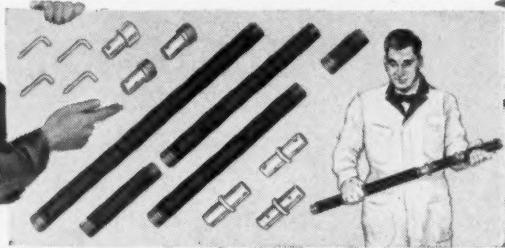
NEW! BANTAM "PORTO-POWER" is now even more powerful, more foolproof! Now more than ever it's the world's fastest body jack equipment! Ask for new "Bantam" SA-50 (\$43.30) hydraulic unit and RC-640 (\$18.50) Pull Ram.

Porto-Power®

New developments slash labor costs dramatically!



Do you have this?



NEW! "LOCK-ON" DOUBLE PURPOSE TUBING slides together quick as a wink! Can cut 50% off time it takes to make set-ups. Can also be threaded together. Ask for "Bantam" AZ-13 ass't (\$19.95) or FZ-14 (\$31.60) 10-ton "Lock-On" tubing.

Here's how to get more body business at a profit!

YOU'RE missing big income by trying to rebuild modern cars without the latest Blackhawk "Porto-Power" hydraulic tools! That's because today's cars have bigger metal sections, increased rigidity, cunning reinforcements, etc. It's impossible to lick these service problems efficiently with *obsolete* methods!

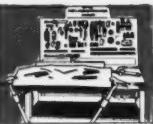
The secret in getting more profitable body business is to *cut labor costs*. And the first step is to bring your "Porto-Power" up-to-date — just as you've had to modernize basic equipment in other departments. So look at your "Porto-Power" today and ACT NOW if you want the big body-shop money!



New hydraulic units and attachments have been announced by Blackhawk.



New P-51 Catalog lists 11 body shop assortments . . . priced to fit any budget.



Users report "Bench-Rack" work centers boost labor output from 25% to 40%.

Have your Porto-Power rated for "profit power"

Yes sir! Just like a motor is rated for *horsepower*, you can now have your own "Porto-Power" equipment rated for its "*profit power*" — right in your own shop. This simple rating reveals golden opportunities and shows what recent developments you need. Ask your jobber for a free rating — or write Blackhawk. Use coupon below.

Only
BLACKHAWK
makes
Porto-Power

NEW
FREE



BLACKHAWK MFG. CO., Dept. P-635
Milwaukee 46, Wis.

Without obligation send P-51 Catalog Have our "Porto-Power" rated for "Profit Power"

Name

Firm

Address

City, State

48-page P-51
Catalog shows
latest "Porto-Power"
Tools and Methods

Why pass up **OPPORTUNITY?**

The **PRE-SOLD MARKET**

is the easiest to **SELL -**

and the market's **PRE-SOLD** on

MORAINÉ

ENGINE BEARINGS

A GENERAL MOTORS PRODUCT



UNIVERSAL
SERVISE
MOTORS

A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

Chilton's MOTOR AGE, MARCH, 1955

Note the cars and trucks that pass your door. Almost half of them were built with Moraine engine bearings as original equipment. It's a replacement market with great opportunity.

Original equipment requirements are highly exacting—and the fact that Moraine engine bearings meet these requirements is your assurance that Moraine bearings are best for replacement as well.

A leader in the Moraine line of original equipment engine bearings is the exclusive M-100 (Durex)—designed to give greater durability and longer life through an exclusive Moraine engineering process.

The M-100 and superior bi-metal bearings are two big reasons why so many of America's cars are factory-equipped with Moraine bearings—including all General Motors cars and trucks. And why, in turn, the replacement market for Moraine bearings is truly enormous!

For 1955, Moraine offers a complete line of bearings for all cars, available everywhere through United Motors distributors. To boost your sales, start taking advantage of the ready-made Moraine replacement market now.

Important bearing news! Moraine-400—toughest automotive bearing ever made—is original equipment in 1955 models of representative cars, trucks, buses and off-the-road vehicles.



Moraine engine bearings are attractively packaged, easily identified on your shelves.

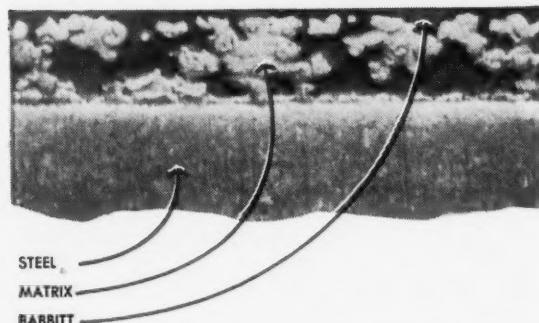


Photo-Micrograph of Cross Section of M-100 Bearing, Magnified 33 Times

THE MATRIX MAKES THE DIFFERENCE
Steel-backed intermediate matrix, of porous copper-nickel, bonds mechanically, as well as metallurgically, with high-lead babbitt having a thin overlay.

The exclusive Moraine matrix (or middle layer) supporting the babbitt and bonded to the steel back makes the M-100 8 Ways Better!

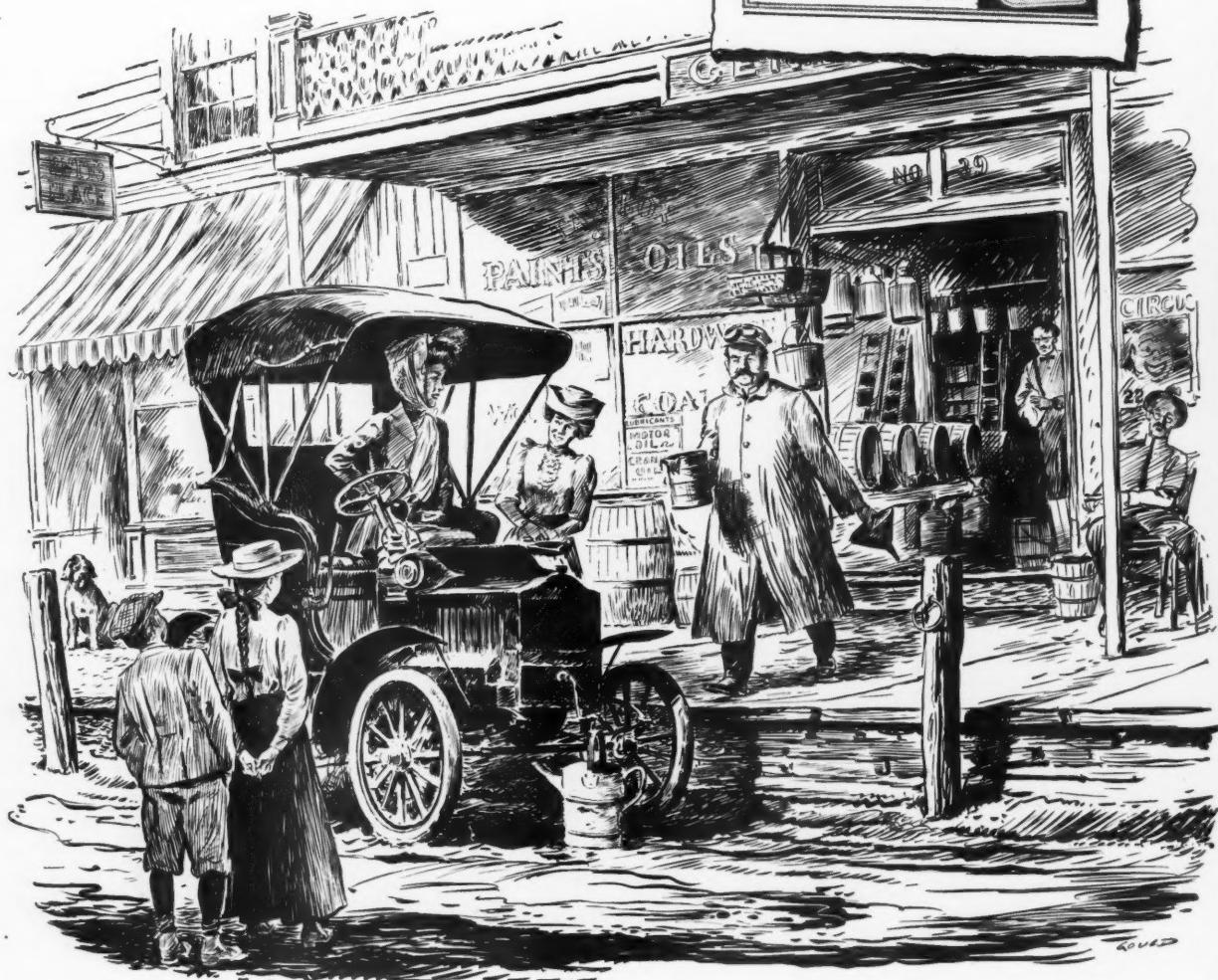
- 1 Greater resistance to fatigue
- 2 Increased load carrying capacity
- 3 Greater conformability
- 4 Greater embedability
- 5 Stronger bond
- 6 Greater resistance to scoring
- 7 Greater resistance to corrosion
- 8 More durability



First in the Post

In 1906 most motorists bought their oil by the measureful from a barrel. Oil was oil, and brands were unimportant. But as soon as it was put on sale in cans, brands became big business. And in building sales and acceptance for manufacturers and dealers alike, the Post has done the most to pave the way. Because of this proved performance—when it comes to automotive advertising . . .

The Post is first



THE AUTO (ABOVE) IS A 1904 MAXWELL. FOR A REPRINT OF THIS DRAWING SUITABLE FOR FRAMING,
WRITE TO HAMILTON COCHRAN, AUTOMOTIVE MANAGER, THE SATURDAY EVENING POST, PHILA., PA.

The Saturday Evening
POST -gets to the heart of America.

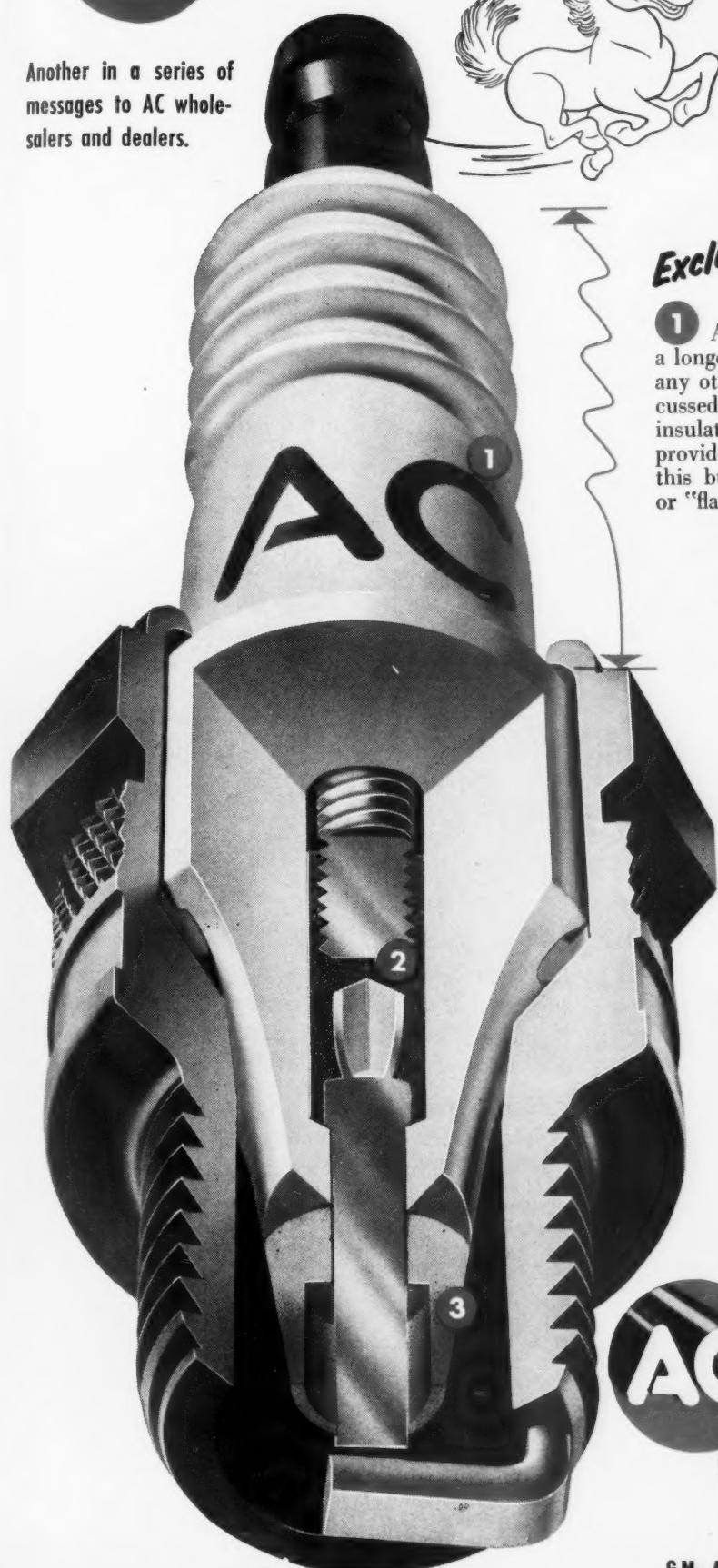
The first motor-oil advertisement appeared in The Saturday Evening Post back in 1906.



brings you the HOTTEST news in

SPARK PLUGS

Another in a series of messages to AC wholesalers and dealers.



Exclusive

BUTTRESS-TOP insulator design!

1 AC's exclusive buttress-top insulator provides a longer path of resistance to electrical leakage than any other make of spark plug. This is the much discussed electrical "flashover" length. This greater insulator surface-length feature is an *extra* that AC provides. Under unusual dirt or moisture conditions, this buttress-top design greatly reduces "shorting" or "flashover."

Exclusive

COPPER-GLASS seal!

2 In AC Spark Plug manufacture the center electrode is sealed in the insulator by a *patented* copper-glass seal. This seal, comprised of powdered copper and glass, is rammed in place, heated to soften the glass, and then compressed around the terminal pin and center electrode head. This assembly is gas-tight and the mechanical bond is more than equal to any condition of use. The seal is resistant to heat shock and vibration far beyond normal plug life. Electrical conductivity, of course, is excellent. Constant in-production tests insure these qualities.

Exclusive

HOT TIP feature!

3 Not only did AC develop the modern ceramic insulator material that outmoded porcelain—AC engineers found a way to form this material into long, thin, recessed insulator tips. Only AC has been able to do this. Because of their thinness these tips heat up faster to burn away combustion by-products that would foul ordinary plugs. The HOT TIP plug is the industry's top development—an AC *exclusive*.



SPARK
PLUGS



AC SPARK PLUG DIVISION
GENERAL MOTORS CORPORATION
FLINT, MICHIGAN

GM AND AC MEANS CONTINUED LEADERSHIP



**When you
get service
you can give it**

- The jobbers who sell Monmouth* bearings always have what you want when you want it. They have the most complete stock of active parts in the business.

Moreover, Monmouth bearings are made by the same men in the same plant that make most of the bearings originally installed in engines.

Because the Monmouth line solves the two most

pressing problems faced by service men... immediate availability and perfect fit... you can speed every bearing job through your shop by using Monmouth bearings. You can give better service, faster service and more profitable service.

Next time you need a set of bearings, call your nearby N. A. P. A. jobber. You'll get the kind of service that keeps your shop humming.

*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth

TRADE MARK

ENGINE BEARINGS

Clevite Service
The Cleveland Graphite Bronze Co.
Division of Clevite Corporation, Cleveland, Ohio, U.S.A.



Your
Jobber
is a Good Man
to Know!



"Fix it up, Joe—and fix the brakes, too!"

"Cheap" brakes just don't pay. All too often they result in creased fenders, dented grilles, and irate customers. Give your customers the top-quality brakes they expect by always relining with Grey-Rock Balanced Braksets.



You'll get more satisfied customers, fewer comebacks, and bigger profits if you're a Grey-Rock dealer installing Grey-Rock Balanced Linings. For with Grey-Rock, balance is more than a matter of high and low friction linings. Grey-Rock uses many different linings in combinations specially engineered for each make and model. And this exclusive Grey-Rock principle assures long uniform brake wear and smooth, safe stops.



Distinctive woven and molded linings are combined in Grey-Rock Balanced Braksets and Truckets for the specially severe requirements of certain makes and models. Where used, woven and molded combinations provide far better brake action than molded linings alone. In other sets, special molded types are used where all-molded combinations give best results. This is a distinctive Grey-Rock feature!

GREY-ROCK FACTORY BONDED SHOE EXCHANGE SERVICE IS THE EASY WAY TO HIGHER RELINE QUALITY, LESS LABOR PER JOB, GREATER PROFITS

Only **Grey-Rock** makes
BALANCED BRAKSET LININGS

GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.



RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Equipment • Asbestos Textiles • Packings • Abrasive and Diamond Wheels

See your Grey-Rock jobber for
FACTORY-BONDED SHOE EXCHANGE

It's the lining that counts
Every piece branded for your protection

Consistently advertised in the

POST and Better Farming



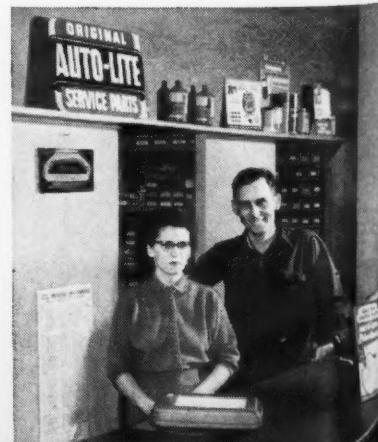
WITH ORIGINAL SERVICE PARTS

**FROM BACKYARD
MODERN SERVICE**



From a one-stall operation to 5,000-square feet of work space accommodating 12 cars . . . original service parts have paced growth of Art's Service all the way. Business now includes truck, tractor and marine service as well as automotive.

Husband-and-wife team . . . While Art supervises the shop, Mrs. Bramble keeps a sharp eye on parts stock and the books.



MOVED UP...

GARAGE TO THIS BUILDING!



SAYS: *Art Bramer*

owner Art's Service, Traverse City, Michigan,
who credits a major share of his rapid
growth to original service parts.

"The success of my business has been built on customer satisfaction," Mr. Bramer points out. "That's why I've always been careful to give honest service and use only original service parts. To make doubly sure, I always tell a customer exactly what work has been done and that original service parts were used."

"Seven years ago, when I started business in my backyard garage, my biggest asset was 17 years experience in automotive electrical service. I wasn't going to risk it with anything less than top quality material—original service parts. I never have, and it's really paid off."

"I started with Auto-Lite and other big-name, well-known lines. Soon my one-man operation was going 16 hours a day and bulging at the seams."

"Today, Art's Service is a big, modern building with five people handling customers from 60 to 70 miles around. We've branched out from strictly automotive to include truck, tractor and marine electrical service, too."

"We've grown rapidly in seven years, and we're going to keep right on growing with honest service and original service parts."



In just seven years, Art's Service has grown from a backyard garage to a big, modern building. Original service parts have been on the shelves from the first day Art Bramer hung out his sign in Traverse City. Now the business pulls in customers from 70 miles around.

The quality of reliable workmanship matched with the quality of original service parts has been the pattern thousands of successful men have followed in the automotive service business. They know original service parts are the key to growth, expanding operations and bigger profits. Investigate the many outstanding opportunities for increased profits open to you with Auto-Lite Original Service Parts. For complete details see your distributor of Auto-Lite Original Service Parts, or write

THE ELECTRIC AUTO-LITE COMPANY

Parts & Service Division

TOLEDO 1

OHIO



"IF AN ENGINE CAN'T BREATHE — IT CAN'T GO! PROPER MUFFLER DESIGN IS IMPORTANT"



*Excerpts from the Notebook
on Walker Silencers by the
late Wilbur Shaw, President of
the Indianapolis Motor Speedway
1946-54, and 3-Time Winner of the
500-Mile Classic.*

"Engines are just like people . . . they have to *breathe* to live. Any unnecessary obstruction in the breathing system of an engine destroys power. That's what is meant by *back pressure*. Every engine has a certain permitted back pressure which must not be violated—average from 2 to 5 lbs. at top speed, depending upon the make of car."

"Because the exhaust system is a definite part of an engine's *breathing system*, it is a muffler engineer's job to

keep the back pressure as low as possible and still *properly quiet* the explosions of the engine. It's not easy. Takes lots of experience and know-how."

"Walker Silencer engineers have a basic rule that is most important. A *Walker Silencer must properly quiet an engine without increasing its permitted back pressure*. Or to say it another way, the exhaust sound must be controlled without lowering the established brake horsepower of the engine. Walker Silencers preserve the *Go-Factor* and the quiet riding comfort of the automobile."



Here are two views showing both sides of the Walker "comparator" equipment. With the engine operating through all speed ranges against a controlled dynamometer load, the exhaust can be automatically directed through a Walker design or the "test" system. Accurate comparative back pressure is shown on a mercury column on the instrument panel. Here you can see the difference a Walker Silencer can make.

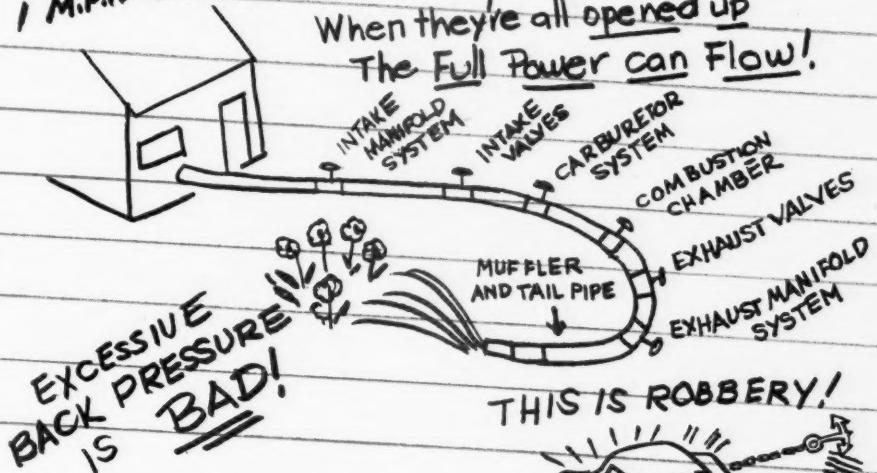


AVERAGE BACK PRESSURE = 2 TO 5 LBS.
 (TOP SPEED)

$\frac{1}{2}$ LB. BACK PRESSURE = 1 HORSEPOWER

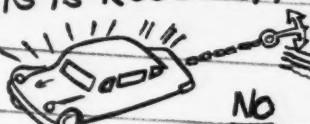
1 M.P.H (Top Speed) = APPROX. 4 H.P.

When they're all opened up
 The Full Power can Flow!



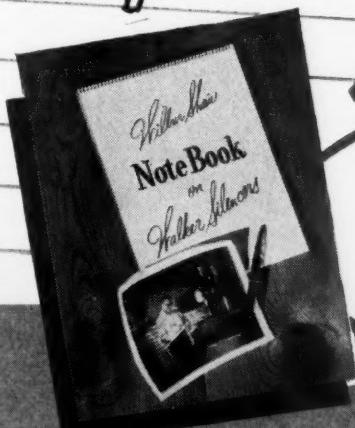
EXCESSIVE
 BACK PRESSURE
 IS BAD!

THIS IS ROBBERY!



"GO-FACTOR"

INCREASES
 GAS CONSUMPTION



GET YOUR COPY
 of the "Wilbur Shaw Note Book on Walker Silencers" from your jobber or by writing to Walker Manufacturing Company, Racine, Wisconsin. This factual exhaust system report was prepared by Shaw shortly before his untimely death.



WALKER SILENCERS

Precision
 Tuned

"..SURE DO BRING OUT THE  FACTOR"

WALKER MANUFACTURING CO. OF WISCONSIN • RACINE, WISCONSIN

EXHAUST SILENCERS • OIL FILTERS • JACKS

New 4-point promotion

1

56,400,000 CONSUMER ADS

in the biggest campaign
on a chemical line
in the automotive industry

56,400,000 Ads in America's top 10 magazines—to give you peak coverage during the 1955 Spring buying season.

"I'm waiting"
says the Hollingshead Service Center

YOUR SERVICE STATION
Hollingshead
CAR CARE PRODUCTS

Drive in now! This famous stand is waiting for you at service stations best equipped to solve your car-care problems. You can improve the appearance and improve the performance of your car with Hollingshead Products—for instance—the MOTOR RYTHM LUBRICATOR mechanically injects MOTOR RYTHM in your carburetor while you drive. It relieves engine noises and removes harmful carbon deposits.

MOTOR RYTHM LUBRICATOR
1875

Hollingshead
CAMDEN 2. NEW JERSEY

set to boost volume for Hollingshead Dealers Coast-to-Coast!

2

Rugged, versatile Hollingshead display stand—costs you nothing in the long run!

The new Hollingshead Service Center stand ties dealers in directly with national advertising. 56,400,000 consumer ads will tell America's motorists that this stand "identifies service stations best equipped to take care of your car." With your name on top, it's advertising at its best—a constant reminder to customers of your good service.

And—look at all these features:
Personalized with your name on top.
Giant rubber tire 8 in. wheels
Open on both sides with sign and price
strips on each side.
Rugged steel construction—chrome-
plated.
Easy-grip steel tube handle—in con-
venient position.



3

Famous products motorists know, want and buy!

Here are the 13 popular items
featured for spring:

MOTOR RYTHM
MOTOR RYTHM LUBRICATOR
RUSTOP
KLEAR-FLO
KLEEN-FLUSH
FORMULA III

LUSTERIZE WAX

VENUS POLISH
INSTANT SEALER
METAL SEAL
LILY WYTE
AIR-FLO POLISH
LUSTERIZE CLEANER



... AND A BIG EXTRA PLUS—

4

ANOTHER FABULOUS PREMIUM OFFER FROM

Hollingshead



Genuine German Genomat Sports Binoculars only

\$1.00 (91¢ plus 9¢
federal excise tax)

Genuine imported German Genomat Sport Binoculars with coated lenses provide 16 times area magnification. They can be yours for only \$1.00 with the new Hollingshead 4-point Profit Program. It's an amazing value with features found only in binoculars selling for \$12.95 and more.

Enjoy all your sports more with these far-seeing "Genomat" binoculars. One look through these powerful glasses will show you why you'll get more enjoyment from your

hunting or fishing trips . . . at boxing matches and baseball games and many other activities.

And remember—you can use this great premium as an extra incentive for your helpers.

Ask your *Hollingshead Jobber* for all the details on the powerful new Hollingshead 4-Point Profit Program. Find out how you can get the imported German binoculars for only \$1.00, or how you can cash in on

MAIL TODAY!

**R. M. Hollingshead Corporation,
844 Cooper St., Camden, N. J.**

Tell me how I can participate in Hollingshead's great spring program. I am interested in Service Center, Binoculars, Both.

Name _____

Firm _____ Position _____

Address _____

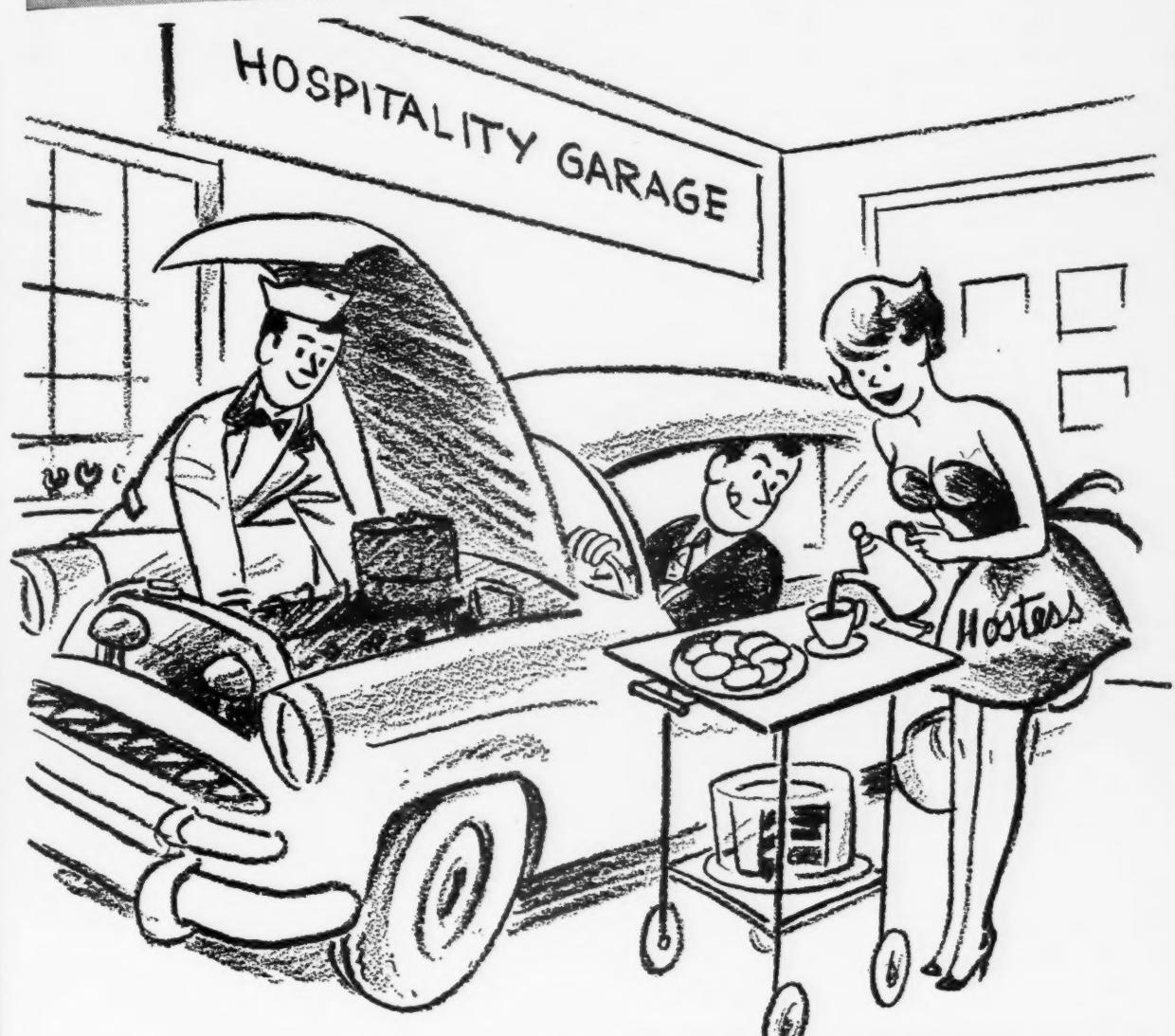
City _____ Zone _____ State _____

PROFITS UP TO 59%!

Hollingshead

**R. M. Hollingshead Corporation
Camden 2, New Jersey**

What makes customers come back for more?



They'll all come back if you give 'em the best. When it's a bearing job... just tell 'em it's TIMKEN! ↗

Sure, customers will come back again and again if a gorgeous gal serves them snacks with every purchase. Every time they're hungry! But how much simpler for you if they'd come back simply because they know you give exceptional service! They *will* if you sell them on your service the right way—by proving to them you use only the best replacement parts. In tapered roller bearings,

of course, that's Timken®. It's the one name your customer *knows* means quality bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN
TRADE MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

NOT JUST A BALL ◉ NOT JUST A ROLLER ◉ THE TIMKEN TAPERED ROLLER ◉ BEARING TAKES RADIAL ◉ AND THRUST - ◉ LOADS OR ANY COMBINATION ◉





Mr. R. O. Arendt
Service Manager of
Downtown Chevrolet
Minneapolis, Minn., says:

"We cut front end overhaul time 60%"

"We've found CP Impact Wrenches cut overhaul time 60% on Front Ends, Springs and Power Glide," says Downtown Chevrolet Service Manager, R. O. Arendt. "Because flat-rate time is cut in half we can schedule work closer, increase labor and parts sales in every stall. The wrench's CONTROLLABLE POWER feature is a must on Power Glide work...it's the most effective means of running these important bolts to just the right tightness, no more . . . no less."

Everybody is happier when he makes more money, and our mechanics are no exception. The 10% increase in their take-home pay plus their personal satisfaction in doing jobs faster has really boosted morale in our shop."

Right you are, Mr. Arendt! And CP Air Impact Wrenches are furnished with attachable angle heads for hard-to-reach spots, they're available in $\frac{1}{2}$ ", $\frac{3}{4}$ " and 1" square drive capacities.



Chicago Pneumatic



AIR AND ELECTRIC IMPACT WRENCHES • PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP-GUNS • BEAD BREAKERS



Better farming makes him a better customer for you!

Top farmers produce twice as much per acre, twice as much per man, as average farmers—and *buy* twice as much to *live* twice as well.

Our job is to help *more* farmers become *top* farmers. That makes *more* top customers for you. For what you sell is needed to achieve *better farming*.

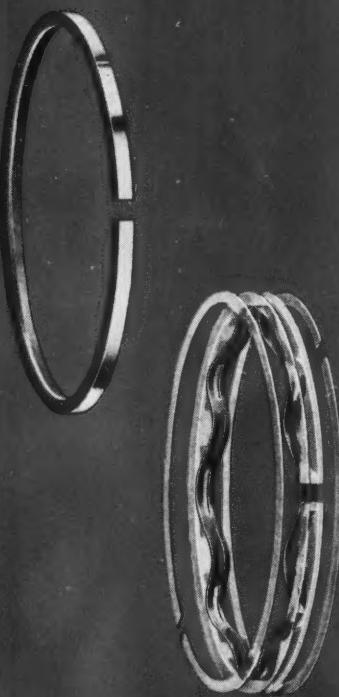
Better farming on more farms—more sales to more prosperous farmers...that's what *Better Farming* means!

Now Country Gentleman's name
and aim are the same

A Curtis publication



Full-Flow Spring



for super-oil-control in

Sealed Power KromeX PISTON RING SETS

Chrome-faced top compression ring and chrome-faced side rails on the oil ring are features of every Sealed Power KromeX Ring Set. Both are vital to the performance of the set in the high-temperatures and high compressions of modern engines. All KromeX Ring Sets are factory-seated for fast break-in and immediate oil control.

Every Sealed Power KromeX Ring Set includes the famous MD-50 Steel Oil Ring—the only ring with the FULL-FLOW SPRING. This is the spring with twice as many slots, so it can't block any piston oil hole or ring slot. It also has long, uniform curves for uniform positive pressure on both ring and piston—assuring greater bearing area, easier starting, and far, far longer wear. Both steel side rails are chrome-faced, for top-and-bottom protection of the whole ring set. Install KromeX Ring Sets—and know you're using the best of everything.

28 leading engine builders use SEALED POWER CHROME RINGS!



Sealed Power Piston Rings

BEST IN NEW CARS!

BEST IN OLD CARS!

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

RINGS • PISTONS • PINS • SLEEVES • VALVES • WATER PUMPS

Newscoop

Action by NADA

Shop licensing pushed
Franchise changes for Ford
Removable dash panels
Fuel injection systems
1956 Automobile Show
New AAA engine ruling

NADA Takes Action

NADA'S ACTION PLAN for 1955 includes these objectives: 1. Elimination of Bootlegging by Federal legislation. 2. Elimination of Phantom Freight Charges by Federal legislation. 3. Preservation of present Retail Exemptions in the Wages & Hours Bill.

4. PRESERVATION OF BENEFITS currently enjoyed under the Taft-Hartley Act.
5. Freezing of Social Security Taxes on employers and employees.
6. Limiting to One Year any extension of the present Excise taxes on cars and trucks. 7. Reinstatement of Territory Security Clauses in dealers selling agreements.

Body Shops Fight Discounts

DETROIT BODY SHOPS, through the Michigan Maintenance Assn., are preparing to meet, head-on, the old problem of competitive discounts to insurance companies on replacement parts.

THE GROUP WILL GO into Federal Court if necessary, charging the Detroit car dealers, in granting identical discounts to insurance companies and repair shops, violate the Robinson-Patman Act because insurance companies are ultimate consumers, not resellers.

Licensing of Shops Pushed

MOVEMENTS TO LICENSE AUTOMOTIVE REPAIR SHOPS are afoot in several states. The argument for the proposal is that it would eliminate unqualified mechanics and shops and provide protection for the public while giving the industry more prestige.

SENTIMENT IS DIVIDED, however, with some shop owners pointing out that licensing might bring more grief from state regulations than benefits would warrant.

New Transmission Won't Bow in '56

REPORTS THAT CHRYSLER CORPORATION will have new type transmissions when it introduces 1956 models are in error. The new units will not be ready by that time.

GENERAL MOTORS, HOWEVER, will have its new improved Hydra-Matic with much smoother transition between gear shifts ready for 1956 models, barring interference from a long strike over the guaranteed annual wage.

Dealer Franchise Changes

FORD HAS MADE SIGNIFICANT CHANGES in its dealer franchise contracts. Price protection, formerly covering only current models purchased within the 12 months preceding price decreases, now extends to discontinued models.

ALSO FOR THE FIRST TIME protection includes factory-installed equipment and accessories on cars in dealers' hands on items costing more than \$5.

OTHER CHANGES INCLUDE A DEALER HEIR CLAUSE, the right to cancel unfilled orders if factory prices are raised, writing factory warranty into franchise contract instead of separately on each car, and increasing contract termination notice from 60 to 90 days.

Removable Panels Studied

ONE OF THE BIG THREE is looking at ways to make components under the instrument panel more accessible for servicing. Longer, wider, and deeper panels increase difficulty of getting at instruments.

UNDER STUDY IS A REMOVABLE PANEL in the firewall, making the units accessible from the engine compartment. Problems are structural strength, rattles, and sealing against heat and engine fumes.

CHRYSLER ONCE USED A REMOVABLE DASH panel but dropped it because of scratching and other damage by careless mechanics.

OTHER NEWS ITEMS!

LOTS OF INTEREST has been shown in fuel injection systems for passenger cars. Apparently two types are being studied, one a solid fuel injection and the other a combination unit involving carburetion.

EXPERIMENTAL ENGINES are being tested now with this type system. One foreign maker has already adopted it.

* * *

THE NEXT BIG INDUSTRY-WIDE MODEL CHANGE shapes up for 1957 models. Among the Big Three, only Lincoln is scheduled for major change for 1956. One of the independents, however, plans a new body and a new engine for next year.

* * *

PLYMOUTH HAS DROPPED the 157 hp V-8 engine from production. It actually turned out only 56,000 of that type; now concentrates on the larger 167 hp model.

* * *

WIDER USE OF RUBBER BUSHED MOUNTINGS in suspension systems is expected by automotive engineers. The rubber mountings eliminate lubrication, make for much longer life and quieter operation.

BALL JOINT SUSPENSIONS now used by Ford and Chevrolet indicate a trend toward fewer lubrication points in modern suspensions.

* * *

USE OF THE 6-VOLT IGNITION on Hudson and Nash lines using V-8 engines supplied by Studebaker-Packard was dictated by economy and the desire for interchangeability with the rest of the line.

TORSION BAR SUSPENSIONS ARE POSSIBLE on more cars next year. GM is known to be looking at such a system. It is not known, however, whether it would be for entire car or perhaps only the front end.

* * *

THE AAA CONTEST BOARD announced recently that a new ruling permitting stock-type engines up to 336 cubic inches displacement in sprint and championship cars has been adopted. The new ruling restricts the engine to the use of the stock block and heads.

* * *

AN EXPANDED 1956 CHICAGO AUTOMOBILE SHOW will be held January 7 through 15, according to an announcement by Earl T. Zweifel, president of the Chicago Automobile Trade Association, the sponsoring organization. The 48th annual event will be held in the international Amphitheatre.

* * *

FORD HAS ANNOUNCED a heating and cooling air conditioner combined in a single unit for its V-8 passenger cars only. Heretofore Nash has been the only company to offer a combined system.

THE UNIT IS BEING OFFERED only as a dealer installed accessory. List price is \$435, plus an estimated 10-man-hour labor charge at local rates.



Washington Wireby Ray M. Stroupe

SEVEN FIRMS WILL SHARE CONTRACTS totalling more than \$20 million according to the Commerce Department. Sperry Corp. got the largest award of \$5.9 million.

OTHER CONTRACTS WENT TO Motorola, Inc., Burgess Battery Co., Bendix Aviation Corp., B. F. Goodrich Co., Radio Corp. of America, and J. P. Stevens & Co., Inc.

Standardized Signals

TURNING, STOPPING, AND STARTING SIGNALS for all cars should follow a single system, says the Harden bill (H.R. 3433). This measure would have the U. S. Commerce Secretary set up the system. States not complying with it after 1958 would risk the loss of federal highway funds.

* * *

COSTS OF RUNNING A GOVERNMENT passenger car look cheap, if you don't get the full story. Officially, U. S. civilian agencies ran their cars for not quite 4¢ per mile in fiscal 1954--but depreciation, insurance, and storage were not included, the government admits.

Used Car Census

USED CARS AND WHO HAS THEM are getting attention of the U. S. Census Bureau. In a sample inventory, the bureau plans to list the whereabouts of used cars in places other than in the stocks of franchised dealers.

Obsolete Roads Raise Business Costs

PRESIDENT EISENHOWER'S RECENT HIGHWAY MESSAGE makes the point that an outdated system of public roads raises the costs of business. These higher costs, the President notes, finally must be paid by the consumer. The consumer then has less money to spend for a number of products he wants.

★ ★ *

ARGUING STRONGLY FOR AN END to federal excise taxes on cars, trucks, and parts is the Automobile Manufacturers Association. At the very least, the AMA tells Congress, tax rates should be lowered from the present 10 per cent to 7 per cent on cars and from 8 per cent to 5 per cent on trucks and parts.

Compulsory Anti Bootleg Law Wanted

NATIONAL AUTOMOBILE DEALERS ASSOCIATION is not satisfied with the Williams bill (H.R. 2688) aimed at car bootlegging. While this bill would permit agreements barring franchised dealers from reselling current models to unauthorized persons, the NADA wants a compulsory antibootleg law.

★ ★ *

ANTIKNOCK RATINGS OF GASOLINE sold in the U. S. have reached another new peak. The Bureau of Mines finds that regular-price gasoline sold last summer had an average research method octane rating of 85.5. At the same time, premium gasoline had a 92.9 octane rating.

Rewinding Is Rebuilding

FEDERAL TAX MEN NOW TELL auto repair shops how to decide the amount of tax due when an armature is rewound for use in a reconditioned generator. Rewinding is a "rebuilding" job, they say, and the tax is based on the fixed selling price of a rebuilt armature.

★ ★ *

NEW CARS AND BETTER VACATIONS are to get a big play from the consumers this year. There will be more money to spend, with personal income expected to rise by about \$12 billion. Government experts see strong signs of over-all good business for the next 12 to 18 months.

Fuel Taxes to Go Up Again

GASOLINE AND OIL TAX BILL paid by U. S. motorists is going to get higher. At least eight states are thinking of boosting these taxes. In 1953, state and federal levies amounted to more than \$3 billion. The 1954 increase probably was at least 4 per cent.

★ ★ *

SPACE FOR RETAILERS is to be offered in the new National Automobile Dealers Assn. building in downtown Washington. NADA will put its offices in only part of the 8-story structure. It is to be completed late this year.

Trouble Shooting with X-ray

TROUBLE INSIDE A CLOSED, RUNNING ENGINE now can be spotted from the outside by the National Bureau of Standards. A powerful X-ray outfit is aimed at the engine. The X-ray pattern is converted into a visible light pattern, and the result is a television picture of moving parts.

Report to Our Readers



The time and money you save may be your own

SPEDIER "in and out" service on customers' vehicles through the use of time-saving equipment and tools is both the equivalent of adding floor space and increasing the number of mechanics employed, points out the Equipment and Tool Institute, a group made up of the majority of automotive equipment and tool makers in the U. S.

And, man that figures! In all the shops and service departments we've called on of late we hear them say—we could use at least one or two more well-trained men, but where are we going to find them. Where are you going to get them? That's a problem we're going to be faced with for a long time to come.

Up-to-date shop equipment and tools may be the immediate answer to the shortage in manpower. For if you can increase the efficiency of the dependable workmen in your shop you cut down your costs and increase your earning power. The time and money you save may be your own!

Now, just in case you think that we're pipe dreaming, E. T. I., the aforementioned Institute, has come out in favor of adequate time payment plans through automotive wholesalers, for both dealers and independent shop owners.

Profits pay the installments

THE E. T. I. program, spelled out by Lynn F. Woolman, executive manager, advocates smaller cash down payments than have been generally used in the past, and also that the monthly installment period be lengthened, particularly on sizeable investments for equipment and tools.

It is the opinion of E. T. I. members that independents and dealers, even those who are exceptionally well financed, should conserve their working capital for current operations, rather than tying it up in fixed assets, such as equipment and tools.

This conservation of capital, E. T. I. maintains, can be accomplished with lower down payments that make it easier for users of modern equipment and tools to buy these needed devices, and with extended monthly payments that would allow you to use these money-makers and let the profits pay the installments.

We can see it now

FOR franchised automobile dealers all over the country there awaits an opportunity to demonstrate that the car dealer is an important part of the community life. We refer to the ten-strike plan promulgated by the NADA Public Relations committee—"Spotlight on Automobiles" featuring the Easter Parade of 1955 models, April 11-16.

We can see it now. Where state and local associations, and individual dealers for that matter, step out and truly demonstrate the purposes of "Spotlight on Automobiles" Week. These are as follows:

1. To provide a dramatic event of civic interest to establish in the public consciousness a greater appreciation of (A) the importance of the franchised new car dealer and (B) what the business he represents means to the economy of the community.
2. To focus public attention anew on 1955 models and on the franchised new car dealers who sell and service these cars.
3. To emphasize the essentiality of the automobile.

Faithfully yours,

Frank P. Tighe
EDITOR

ZERNIAL

NewsScene —



BASEBALL AND CARBURETORS round out the year for Gus Zernal, long-ball hitting outfielder for the Kansas City Athletics. During the off season Gus works in the electrical service shop he and his father-in-law operate in Los Angeles, California. Gus thinks the Athletics' switch from Philadelphia to Kansas City will produce unexpected achievements by the players, but he's happy for personal reasons.



NEWLY ELECTED PRESIDENT of the National Automotive Maintenance Association, Inc., Ed Putman (left), receiving the gavel from Bill Beach, a member of the National A.M.A. Executive Committee. The ceremonies took place at a meeting of the Panhandle Independent Garagemen's Ass'n in Amarillo.

"PUMPING FOR POLIO" Vice President Richard Nixon recently wiped windshields at a service station in Washington, D. C., to formally initiate the March of Dimes drive. The station contributed its day's profits to the fund.





THE 'CHIPMUNK' SWEEPS the lawn with a brush-type leaf sweeper attachment. The 2½ horsepower riding tractor is produced by Strunk Equipment Co. and is shown being driven by Frances Collins. Attachments include a lawn mower and utility cart. More accessories will be offered soon. A 5-mile per hour speed limit and a clutch with automatic braking are safety features.

BY LAND OR BY SEA this German multi-purpose automobile trailer serves almost every need of camping enthusiasts. The 4 ft x 7 ft unit was presented for the first time at the International Sports Equipment Fair at Weisbaden. It's used as a sleeper for two persons, as a boat with an outboard motor and as a trailer for general hauling jobs. The canvas top with built-in plastic windows and mosquito netting can be removed if and when desired.



Engineering Highlights



by Joseph Geschelin
Engineering Editor

AN enthusiastic audience of some 275 people, representing motor vehicle manufacturers and the oil industry, met in Detroit Feb. 17 on the occasion of the 6th annual meeting of the lubrication committee of API. First, we wish to summarize some comments made by V. G. Raviolo, Ford Motor Co., in appraising what's ahead in engines and other details. For one thing, Raviolo disregards the usual kind of forecasting, based upon past experience, because developments in recent years have appeared in big leaps rather than small doses. He believes that engine horsepower will continue to rise, with increases up to 30 per cent in the output of low priced cars during the next few years. With this will come increases in displacement, in efficiency, and in compression ratio.

Raviolo sees 10 to 1 compression ratio by 1957, and is sure it will reach for 12 to 1, although engine designers do not yet know what is needed to get up to this value, and no one knows yet whether 100-plus octane fuels will be available in quantity to meet this development.

(Continued on page 88)

MANAGEMENT CLINIC



Let's rid this industry of bootlegging and eliminate phantom freight, but let's continue to keep the public interest paramount in all our endeavors

NADA'S Action Program



by **Charles C. Freed**
DeSoto-Plymouth, Salt Lake City, Utah

The following is a condensation of Mr. Freed's address as retiring president at the recent convention of the National Automobile Dealers Assn. in Chicago.

WE have been going through a great period of change, not only in our own businesses, but in our national and international affairs. The entire world has been going through a period of transition from years of a war-time market to what we all hope and fervently pray will be a longer period of peace-time prosperity.

Until just a short 18 months or so ago many of us knew only one problem. That problem was one of too little production. Almost overnight the situation changed. Today, production as far as quantity is concerned, certainly is no longer a problem. It's now one of proper distribution of that production and of selling the cars profitably after we receive them.

I believe that every automobile dealer should make a just profit.

I believe that every automobile dealer should realize an equitable profit on his investments of time, talent and money. . . .



NADA's Executive Committee. Seated, l to r, J. J. Verschoor, Allan Mims, F. H. Yarnall, C. E. Fribley, F. J. Bell. Standing, l to r, C. C. Freed, D. N. Holmes, R. D. McKay, Frank Dawson, G. F. Ziesmer, A. M. Costly, T. F. Abbott, Jr., F. W. Talbott, W. L. Mallon, O. R. Harrod, G. H. Davis. Committee meets Apr. 5-6.

for 1955

That's why I like the theme of this 1955 NADA Convention—"Blueprint for Profit."

As we consider our future today, let us make sure that all of us in this automobile business realize that we are actually engaged in the greatest transportation business of all time.

The nearly 60 million motor vehicles operating over the highway system of our country today are directly dependent upon us for service and replacement of parts to keep them in operation.

What would happen to American industry, farming, business, schools and churches if all of us operating transportation headquarters for our communities should shut down for just one week? We know the answer.

America would be in chaos. No other form of transportation is capable of substituting for our rubber-tired vehicles for a week, for a day or for an hour.

Yes, today we are vital to America's economic system. We represent America's number one transportation system. We're proud of this position; we accept its responsibilities.

Last year ours was a \$44 billion industry.

We dealers sell an average of more than 16 thousand motor vehicles a day. In the average work period we sell nearly 2,000 cars an hour.

In the two minutes I have been talking to you our salesmen have closed about 50 sales. Yes, our business is a bellwether industry in our nation's economy.

Let us remember too that we sell the world's most wanted commodity. Whether it be in Communist China, Russia or in our grand free America, everyone yearns and plans to own a new automobile.

The public's desire for cars is a great advantage, an admitted advantage. Yet what has happened to us as businessmen in just a few short months? With sales close to an all-time high in 1953, we ran thirty-ninth profitwise among forty-one classes of retailers.

Let us put it in other words: Only two of the retail groups, of merchants studied, had a worse profit picture than ours.

This situation started to show up in the first six months of 1953, when our profits dropped to 4.4 per cent. Then, for the first six months of 1954, we showed, as a group, a profit of 1.9 per cent.

This proves, beyond question, that automobiles—your new cars and mine—must be sold aggressively and intelligently. They must be sold; not just traded away.

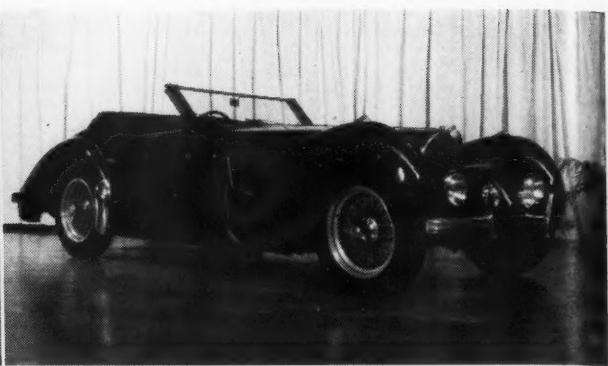
To put our situation bluntly, we find ourselves today an industry in a depression in the midst of plenty. Thousands of our members are in the red.

When we consider both segments of our industry—the manufacturing and retailing segments—it's plain that in most cases the new car

(Continued on page 82)



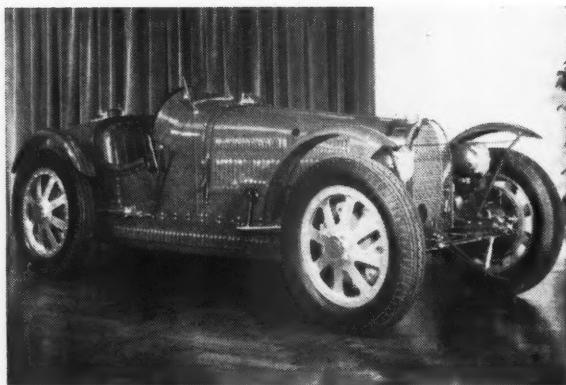
The luxurious British Bentley Continental which was introduced after World War II, is shown on display at the Ford Museum. The technical features of this sleek vehicle's engine include: 6 cylinder, bore and stroke 3.625 x 4.50 in. Displacement 278.6 cubic inches. Horsepower 175 at 4800 rpm. The car is said to be capable of speeds up to 120 miles per hour.



Here's a car with a history. This model with the smooth flowing lines is a 1939 French Bugatti type 57SE. It was the last car made by the famous Ettore Bugatti and was considered the greatest sports car of all time. Engine: 8 cylinder OHV supercharged, bore and stroke 2.84 in. x 3.94 in. Displacement 195 cu. in., 220 hp at 5500 rpm. Speed 150 mph.

Classics Convene at the

The old as well as the new was emphasized in this year's Sports Car

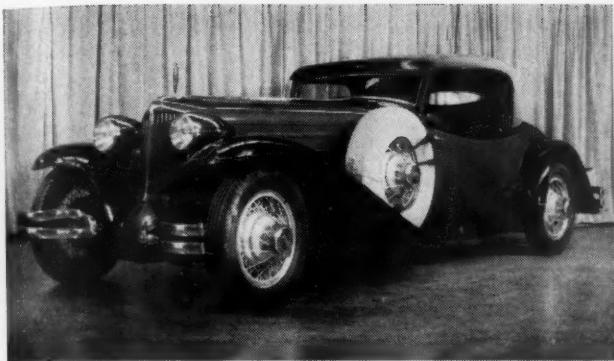


One of the biggest guns in European racing of yesterday is this little French racer. It is the famous Bugatti type 35-B. One of the most successful Grand Prix racing cars ever built. Technical data include: engine, 8 cylinders OHC, bore and stroke 2.36 in. x 3.47 in. The car develops 140 horsepower at 5200 rpm. It also boasts a wheelbase of 94½ in.

THE most elaborate show of foreign and American sports cars ever presented by the Henry Ford Museum was held recently with 55 outstanding models on exhibit.

This year's show, entitled "Sports Cars Internationale," featured cars from Italy, France, Spain, England, Germany and the United States. Many of them were shipped from overseas, and made their first appearance in this country. Nostalgic cars on exhibit, considered pioneers in sports car development included a 1919 Lancia and a 1936 Auburn Super-charged Speedster, guaranteed by the factory to "exceed 110 mph."

The Museum devoted over 25,000 square feet of floor space to the two-week exhibit, third to be presented at that institution. Last year's attendance record at the show was shattered when 38,700 visitors turned out to look over the extensive sports car display.

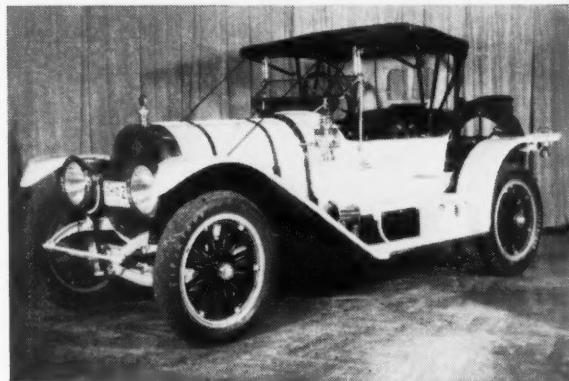


A prominent position was enjoyed at the show by this big car. The long-hooded job is none other than the classic L29 Cord with a specially designed body. Powerful in appearance this car has won top honors at the Monte Carlo Automobile Show. Engine: 8 cylinders, L head; bore and stroke 3 1/4 in. x 4 1/2 in.; displacement 298.6 cu. in.; HP 33.8 SAE, 125 developed.

Modernistic in design and powerful this car is a world-wide favorite. It is the Mercedes 300 SL made by one of the oldest and best known manufacturers in the industry, Daimler-Benz AG, Stuttgart, Germany. Engine: 6 cylinders, in-line OHC (inclined at 45 degrees); bore and stroke 3.35 in. x 3.46 in. 240 hp at 550 rpm. Displacement 183 cu. in.

Ford Museum

Internationale at the Henry Ford Museum

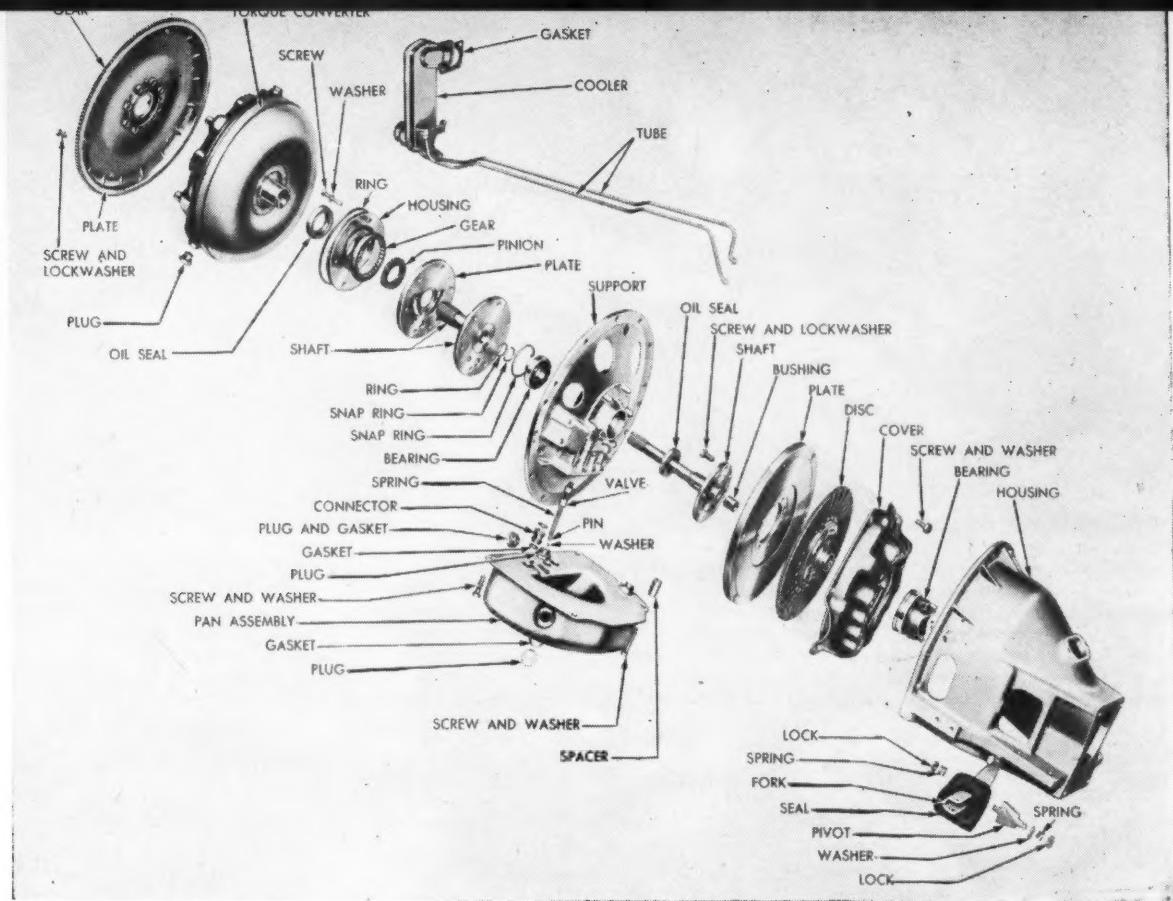


A familiar name the world over this Ferrari 212 is also popularly known as the "Wild Horse of Modena." The car was designed by Columbo, who was formerly with Alpha Romeo. The Ferrari factory claims that it takes 2000 hours to complete one of these speedy cars. Engine: V-12, single OHC; bore and stroke 2.87 in. x 2.31 in.; displacement 180.2 cu. in.

Here is one of America's old-time favorites. The 1911 Pope-Hartford sports car. The large expensive vehicle is principally noted for its victory in the 1912 hill climb at Atlanta, Georgia. Engine: 4 cylinders, OHC bore and stroke 4 1/4 in. x 5 1/2 in. Hp 50 (rated), displacement 396 cu. in. Wheelbase 120 in.

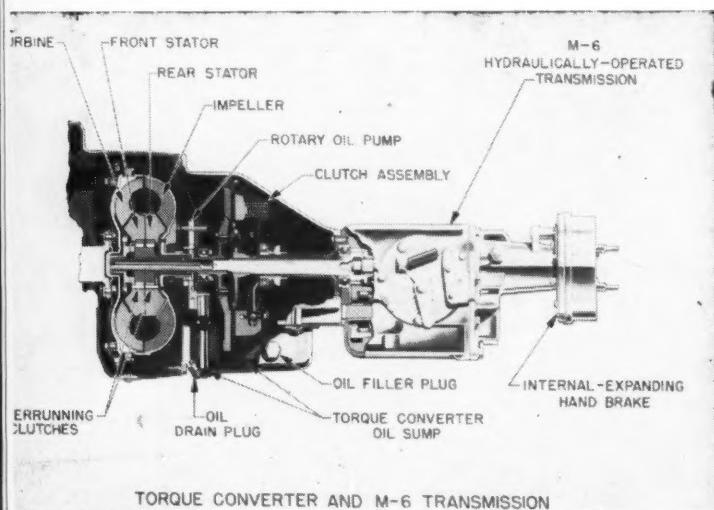
Another car displayed at the show that is a relative newcomer to the field is this Porsche Spyder Competition car. The lowslung, little German car has been introduced since World War II. Engine specifications: 4 cylinder horizontal opposed; bore and stroke 3.14 in. x 2.75 in.; horsepower 110 at 7000 rpm; displacement 85 cu. in.; speed is 125 mph.





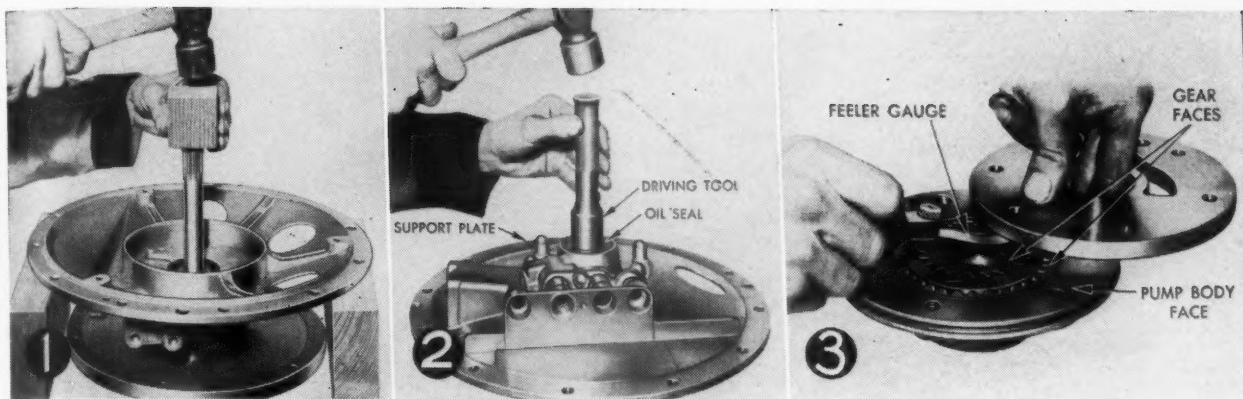
An exploded view showing the proper relationship of the torque converter and clutch assembly

Trouble Shooting on Torque



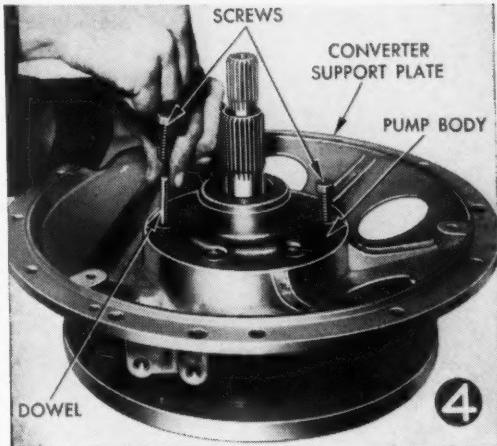
Torque converters are not a problem to service if you have the knowhow. In use since 1951 there are various types that are just beginning to require attention

A cross section view of the torque converter, clutch and M6 transmission.



1. Installing shaft bearing in support plate.
2. Installing support plate assembly to shaft.
3. Checking clearance between pump body and gears.
4. Removing pump body from support.

by Jack Montgomery
Technical Editor



Converters

THE fluid torque converter used on Chrysler and DeSoto models with the M6 transmission operate identically, but vary in the method of supplying oil to the unit. On the six cylinder Chrysler, DeSoto and Dodge models through 1953, the torque converter used the oil supply from the crankcase. The following article covers the torque converters having their own oil sump.

Filling Torque Converter:

Oil level in the reservoir should be checked every 1,000 miles and changed every 10,000 miles. Drain oil by removing filler plug on left side of oil reservoir below the clutch housing and fill to level of hole with fluid drive oil. Start engine

and run between 500 and 700 rpm with transmission in neutral. With engine running, continue to add fluid until oil level remains constant at the bottom of the filler opening then replace the plug.

To remove all the air bubbles from the oil, shift transmission into high range and apply parking brake. Then again run engine between 500 and 700 rpm for not over two minutes. If oil level has gone down, refill reservoir to bottom of filler opening. Replace filler plug.

An oil cooler is mounted to the water pump flange on the left side of engine. If torque converter oil looks suspicious the cooler should be removed and checked for leaks.

Locating troubles:

If the transmission shifts through its ranges satisfactorily and sounds all right in neutral, but the car does not run smoothly, difficulty in the power train between engine and transmission

(Continued on page 101)



Sow Now to Reap Spring Profits

Now is the time to get your Spring selling program under way. The early promoter gets the lion's share of this seasonal business

by R. C. RITTENHOUSE
Associate Editor

THE automotive shop usually can't be called a seasonal operation. But Spring probably provides the best promotional fodder and the most receptive market of the selling year. Spring-time finds the buyer in an optimistic frame of mind. He's going to consider getting the "old bus" whipped into shape (both mechanically and in appearance) for the fair weather

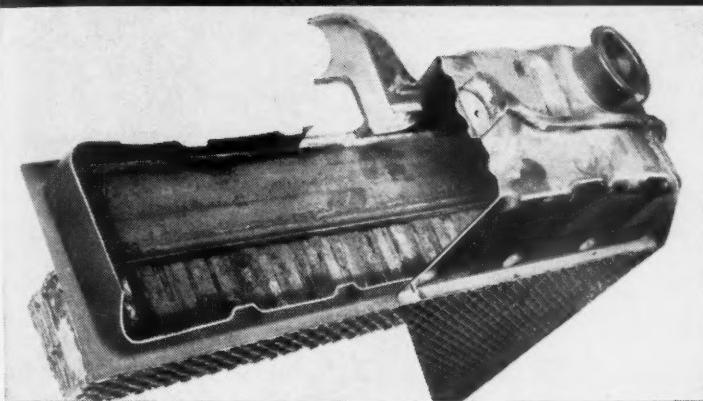
months ahead. But he's only going to *consider* it. A prospect still has to be sold the service *now* or he will most likely delay having it done and forget about it completely. Result—NO SALE.

Here's where sales promotion enters the picture. This combined with advertising is a big tool in the business of getting business for the shop. It tells the buyer how to get what, when and where. It continually reminds prospects that they need the service and that this shop is in business to provide it.

It is the device by which the shop gets the prospect interested enough in a particular service to stop by and get the job done. At the shop, point-of-sale merchandising (signs, displays) helps to interest the customer in additional services. However, while a great deal may depend on promotion and advertising efforts, once the prospect is in the shop the real selling job

(Continued on page 114)

Sell Cooling System Service



TO sell customers this service tell them that complete Spring service of the cooling system is a must. One important reason for draining anti-freeze is that the rust inhibitor found in most solutions loses its effec-

tiveness during one winter's driving. Further use would leave an unprotected cooling system which will rust and accumulate radiator clogging residue.

Show the customer corroded

cooling system parts or a tube of dirty and rusty water that has come from a radiator. Maybe their own.

Then recommend and do this:

- ✓ Drain and flush the cooling system
- ✓ Add rust inhibitor
- ✓ Examine and tighten all hoses
- ✓ Check pressure cap and seal
- ✓ Examine oil cooler connections
- ✓ Check heater hoses
- ✓ Remove and check thermostat
- ✓ Reverse flush heater
- ✓ Check fan belt condition and adjust
- ✓ Clean core fins with compressed air
- ✓ Examine core for minor leaks

(For additional information on the cooling system see page 50)



Sell Oil and Lubrication



TELL the customer that constant use of the choke in winter driving causes gas to dilute the oil supply which as a result can't do its job effectively. This

plus increased condensation created by temperature changes and short-run driving produces sludge. Here we have the birthplace of harmful acids and en-

gine enemy number one—varnish. Neglect in preventive maintenance could lead to a major engine job.

Universal joint lubrication should be recommended on all cars with 25,000 miles or more on the speedometer. Since most cars are using joints that have to be taken apart to lubricate they are being neglected. Selling this service when the car is in for a lubrication and spring tune-up is a natural. Show the customer carboned and varnished valves, dirty oil, scored pistons, sludged oil filters, worn joints and broken valve springs.

Then recommend and do this:

- ✓ Oil change and a new filter
- ✓ Repack wheel bearings
- ✓ Change transmission lubricant
- ✓ Check power steering oil
- ✓ Change differential lubricant



Sell Tune Up

TELL the customer that after a winter of hard starting, constant temperature changes and just plain mileage, having a tune-up makes good sense. A

tune-up now provides a fresh start for the long hard drives in fair weather days ahead. A complete checkup now may prevent a spoiled vacation trip.

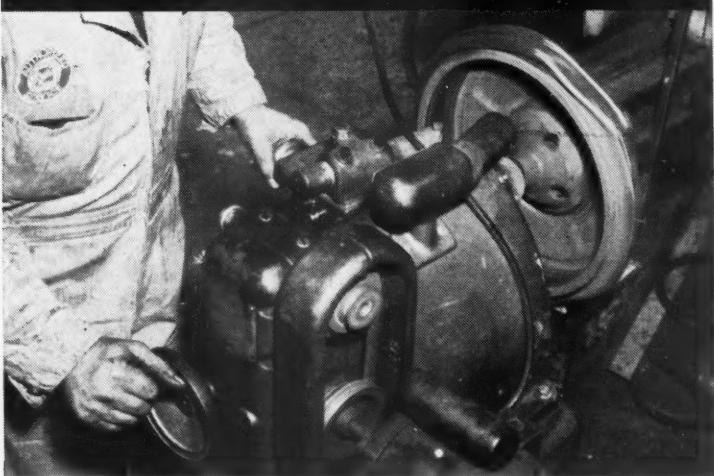
Show him the cost of a major overhaul as a result of neglect.

When he's seen enough recommend and do this:

- ✓ Remove and test spark plugs
- ✓ Test vacuum
- ✓ Test compression
- ✓ Analyze combustion
- ✓ Remove and clean carburetor air cleaner
- ✓ Examine distributor breaker points and check gap
- ✓ Check fuel pump pressure
- ✓ Clean and adjust carburetor
- ✓ Examine high tension wires
- ✓ Check coil output
- ✓ Check generator and starter brushes
- ✓ Voltage regulator setting
- ✓ If a Dynamometer is available the car can be put through a series of performance tests.

Spring Profits

Sell Brake Service



REMIND the customer that winter driving taxes brake systems to their limit as it does all other parts of the car. Safety is an obligation that

every car owner must observe to protect himself, his family and other motorists. Good brakes are a must for safety. A check-up now will help pre-

vent expensive replacements or more serious trouble later. Good adjustment and new linings are the best insurance.

Show him a wrecked car, worn tires, scored brake drums. Pull a wheel and show him the condition of his own brake lining.

Then recommend and do this:

- ✓ Flush the brake system and install new brake fluid
- ✓ Remove all wheels and examine brake lining, drums, wheel cylinders and hoses. Replace or repair as needed.
- ✓ Blow out all loose dust
- ✓ Check oil seals and repack wheel bearings
- ✓ Check hand brake lining and adjust if necessary
- ✓ Free-up emergency brake cables

THE customer will listen when he's told that during winter months the front end takes a beating. Wheels are knocked out of line from chuck holes or curbs that may be hidden by snow. If not taken care of the misalignment will create uneven tire wear which will prove costly. Unbalanced wheels will cup tires rapidly and make car handle poorly at high speeds. Rotating tires and proper inflation add many miles to their life. Worn tires should be replaced for safety.

Show him a badly worn tire as result of poor alignment—balance.

To save him money in the future recommend and do this:

- ✓ Check and correct caster, camber and toe-in



- ✓ Examine upper and lower control arm pins and bushings for wear
- ✓ Check shock absorber action
- ✓ Adjust steering gear worm and sector
- ✓ Check power steering fluid level
- ✓ Balance all wheels and rotate tires

MOST folks will think twice about their safety. Tell the customer that short cold trips and long periods of idleness cause excessive condensation to form in muffler and tail pipe units. In addition, these parts are subject to the damaging effects from salt and temperature changes all winter long. As a result they fast become rusted and develop dangerous leaks and breaks. As in the case of wheels, these parts can be jarred and damaged by hidden winter road hazards. The dangers of carbon monoxide are just as real in summer as they are in winter.

Show him a rusted out tail pipe and muffler; charts that indicate points where leaks may develop if not checked regularly.

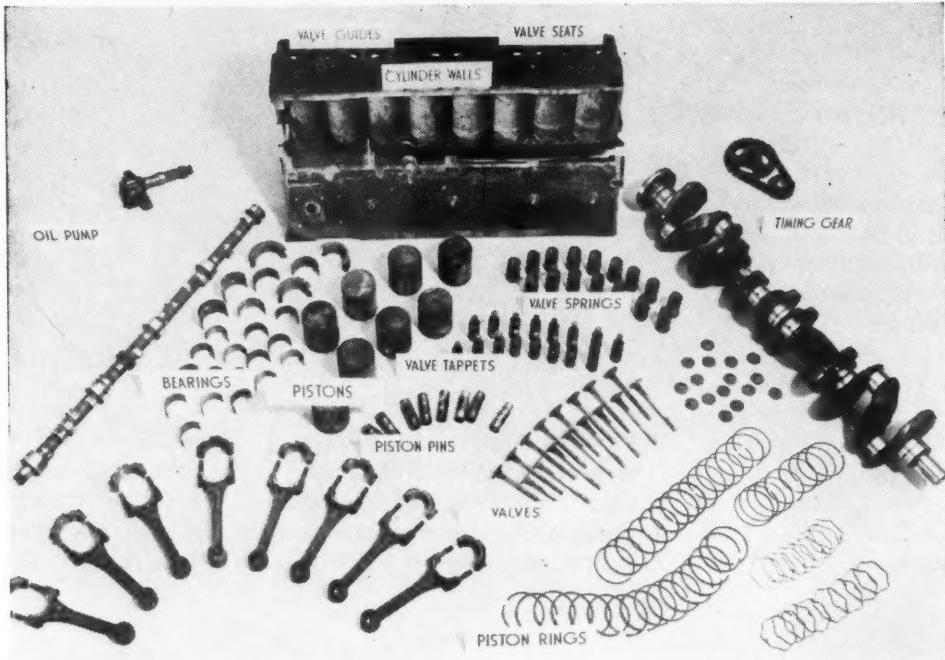


Then recommend and do this:

- ✓ Examine muffler, exhaust pipe and tail pipe for leaks and kinks

- ✓ Check manifold gaskets for leaks
- ✓ Free-up heat damper valve
- ✓ Check all exhaust line mountings

Spring Profits



Most of these moving parts of an engine are affected by poor cooling.

Here's a Dirty Trick

You Can Profit By

Poor preventive maintenance of the cooling system in today's high compression engines can result in serious damage. Your customer relies on you for proper advice and service

MILLIONS have been spent in recent years by oil companies to improve the quality of gasoline, and more millions have been spent by automobile manufacturers to develop the finest engines of all times.

Yet, the best performance from either is not possible if the engine is not kept clean internally.

A dirty cooling system increases the octane rating requirements of a car, engineers have learned. Changes have been made in the late model car that make this care even more important.

There is a good chance that it has a valve-in-head V-8 engine with a high compression ratio. It probably has hydraulic valve lifters which are being featured in most new models. Also, this new-type engine has more horsepower, develops more heat and must provide for numerous power accessories. It must share the engine compartment with these additional units in a space restricted by lowered hood design and less open grill area exposing the radiator.

(Continued on page 120)

By the time the fire company had arrived Tommy was beating the blanket with a shovel smothering it into an ugly smouldering mass.

SPRING house cleaning—it hits them all. You may be a first class husband 50 weeks out of the year, but along about now you're just second class help. The woman who started it all (may she rest in a pile of rugs) certainly fixed things up for the generations to follow. The mania now has been acquired not only by the sanitation departments of the split-level set, but by industry as well. And when harassed husbands finally find haven and protection in their own offices, they start taking it out on their own help. Anyway that's what Tommy Winters thought when Pop O'Neill came in Monday morning with his pick-up piled high with junk from the attic and the garage.

"I want you to take this load of stuff down to the dump," Pop told Tommy. "And then get back here pronto. I've got a nice little job all lined up for you."

Now Tommy knew right well that there was some intrigue afloat. Cause when Pop speaks that way, he's got something up his sleeve. "Spring housecleaning time," Tommy grumbled under his breath as he climbed into the truck.

But on the way he got an idea. "Why not?" he mused. "Might try anyway." Two hours later he drove into the garage.

"Where the hades you been all this time?" Pop growled. "Send you out on a 15 minute errand and you take all morning. If you think you got out of any cleaning up around here, you got another think coming. Now get back to the tire section and get the area straightend up. Then start on the junk under the work bench. Then get a pan of solvent and start on the floor around the lift. Then . . ."



Pop Fires The Boys

Pop gives advice on scrubbing up the shop "because people like to see a clean place," and on the importance of fire prevention but finds he hadn't practised what he preached

"But Pop, let me tell you . . ."

"Afterwards. After we get through with this little job." Pop disappeared into the office and Tommy reluctantly slipped on his overalls for the nice little job at hand.

Larry was under a Chevrolet, in for a new drive shaft. "Get that dirty look off your face," he called over. "Pop sees that, he'll want that scrubbed too."

"What's so all-fired important in cleaning up like this?" Tommy complained. "It'll just get dirty again."

Larry laughed. "Pop went to a lecture last week—a talk by (Continued on page 108),



READERS'

TROUBLE

by Jack Montgomery, Technical Editor

- Automatic choke picks up water
- Generator reverses polarity
- Hydramatic shift erratic
- New rings should help
- Olds' starts hard when hot
- Clutch vibration problem
- Acts like lean mixture
- Loses power when pulling
- Lincoln distributor specs

Automatic Choke Picks Up Water Then Sticks

I have a 1953 De Soto V-8 that is getting water into the automatic choke unit. On removing the choke cover there was at least a teaspoon of water (not vapor) in the unit and everything was rusted together. I completely overhauled the carburetor and replaced all parts including the choke assembly. The heat pickup pipe was plugged on the exhaust manifold end. We opened that and everything worked fine for two months then the same thing happened again. Now, on removing the heat pickup pipe, I put my finger over the end of the pipe and I could feel

a slight pulsating. Is it possible that the stove in the exhaust manifold is cracked or the manifold casting faulty and cold engine water is being pushed up the heat pickup pipe into the choke, assisted by the natural vacuum from the carburetor suction. Or, is that pulsating in the pipe natural. The engine is not losing water from the cooling system and no water has been added since the car was new, over 30,000 miles.

Ernie Wurfer
298 E. Evelyn Ave.
Sunnyvale, Calif.

USUALLY when a condition like yours exist, it is due to a fractured heat tube in the exhaust

manifold. In some cases a loose tube would do the same thing. In any case I would suggest removing the manifold to make a thorough examination. If the tube is cracked the complete manifold will have to be renewed.

Generator Regulator Reverses Polarity

I have a problem with three 1952 Pontiac generator systems. When the lights are on, the polarity changes and the ammeter discharges and clicks. You can race the engine and break it loose and the system will resume charging. Sometimes when the switch is cut off with the lights on, the polarity will remain charged and run the battery down. I have switched generators and voltage regulators three times and have checked all wiring and as of yet, not helped the trouble.

Larry Pierce
Pierce's Garage
906 East Wood St.
Paris, Tenn.

USUALLY, reversed polarity occurs when lights and accessories are turned on and the generator is at low speed or stopped. The returning current from the lights or accessories always will seek the path of least resistance, which in your case is probably

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

CLEARING HOUSE

SHOOTING PROBLEMS

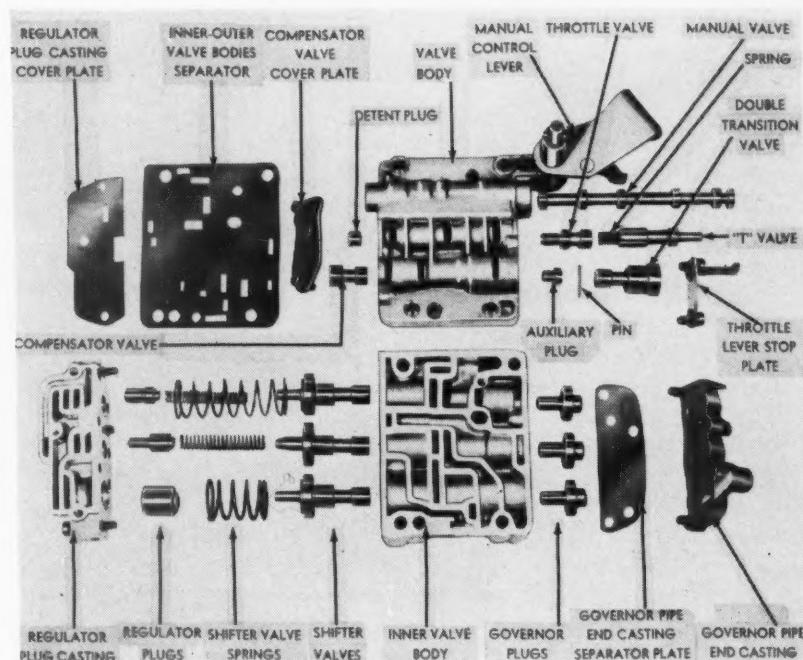
across the voltage and current regulator points, through the generator and back to the battery. Since this flow of current is in the wrong direction, through the field coils, polarity reverses itself.

To correct a condition of this nature all connections must be clean and tight. The regulator should have a good clean ground at its mounting, in some cases it is a good policy to install a ground strap between the body and engine.

Hydramatic Acts Up After Overhaul

I have a 1953 Oldsmobile 88 with Hydramatic which was slipping in third speed. After checking oil pressure and making stall tests, I removed the transmission and installed new rear clutch discs, springs and seals. Removed control valve assembly, cleaned and checked all springs and plungers. Now the transmission is ok except that it does not shift readily from second to third. It will make the shift at abnormally high speeds or by releasing the accelerator slightly. Now I believe the trouble to be in the control valve. I would appreciate any suggestions as to the remedy for this trouble.

E. A. Blass
Blass Brothers Auto Service
Cleveland, Ohio



USUALLY, when a condition like this exists, it is due to the linkage not being adjusted properly, a faulty governor and in some cases the control valve assembly. I would suggest rechecking the shift linkage first and then the other two items.

to a broken piston land and ring. (New pistons were put in perhaps 25,000 miles ago.) Would a ring job prove satisfactory in this case?

Adrien Adelman
424½ Randolph St.
Meadville, Pa.
(Continued on page 54)

Resizing Pistons and Ring Job Recommended

I have a 1941 Oldsmobile 6 sedan, which has developed a noise in the engine. I was told it is due

MOTOR AGE FLAT RATE AND SERVICE MANUAL



Clearing House Continued from Page 53

SINCE new pistons were installed about 25,000 miles, any of the well known brands of rings should do a satisfactory job on this engine. I recommend resizing the pistons, this method works well. Most jobbers stock standard and chrome rings so you shouldn't have any trouble obtaining a set.

Engine Is Difficult To Start When Hot

I have a 1951 Oldsmobile 88 super which we have not been able to start especially if it is hot. Here is what we have done. Installed rings, ground the valves, replaced rod bearings, freed up and cleaned all hydraulic lifters. Installed new plugs, points, coil, condenser, cap, rotor and also the small wires inside the distributor. Plus a new heavy duty battery, new carburetor, overhauled the starter and replaced the fuel pump. Blew out the fuel lines and also renewed the timing chain and battery cables. The ignition was wired direct to the coil from the battery and the radio condenser removed from the coil.

Bill Valentine
Searcy County Motors
Marshall, Ark.

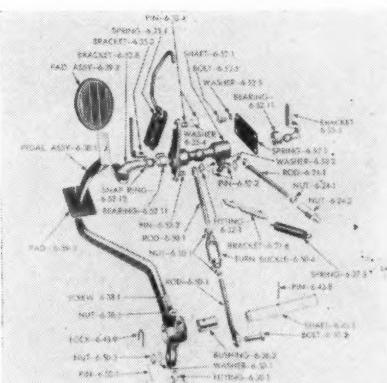
IT seems to me that you have done a very thorough job in trying to repair this car. About the only thing that comes to my mind is vapor lock. I would suggest you insulate the fuel pump and the gas line from the fuel pump to the carburetor. Also make a fuel pump pressure test, the pressure may be too high, causing the carburetor to flood while the car is standing.

Would Like Remedy to Stop Clutch Vibration

I have a 1953 Plymouth with a vibration coming from the clutch. I removed the three lever clutch and pressure assembly and replaced it with a new four lever matched

clutch and pressure assembly, and it still has the vibration. Please advise me as to whether there is anything that can be done to stop this.

Alger L. Evans
Evans Garage
New Brighton, Pa.



R EPLACING the clutch cover and disk usually takes care of this annoying vibration. There have been cases where the exhaust system touched the underneath of the car, setting up a vibration. Also, the clutch idler link bushings should be checked for excessive wear. Bent fan blades can cause an engine to vibrate, also.

Engine Starves for Gas When Accelerating

I have been having trouble with a 1951 Cadillac 62 series. When the car is standing still and I give it the throttle gradually and it reaches about 5 to 20 miles an hour, the car acts as if it doesn't get enough gas. The moment I pass my hand over the carburetor it seems to run well. The fuel pump shows 4 lb. pressure. I installed a rebuilt carburetor and checked the distributor, but the car still runs the same. I took out the rebuilt carburetor, checked all jets and adjustments, and they were all right. In addition, I put four new copper washers over the studs where the carburetor is mounted. Checked valve clearance and have about 112 thousand clearance average. I would like to know what the clearance is supposed to be. Please

explain what usually happens when clearance is incorrect on hydraulic lifters.

J. Garcia
Garcia Automotive Service
San Jose, Calif.

FROM your description of the trouble it sounds like a lean mixture at part throttle. I would suggest checking the float level and installing richer jets. The valve tappet clearance on these jobs varies from .000 to .115 inch so yours is within the limits. If clearance is over .115 inch, the lifters will be noisy and if less than zero, the engine will idle rough.

Engine Loses Power And Backfires on Pull

I have a 1948 Pontiac 8 that backfires on quick acceleration and keeps on losing power until you let up on the throttle. Although I overhauled the distributor, the degree of dwell will change from 28 to 50 degrees. I installed a new distributor with the same results. The coil checks O. K. I replaced the carburetor, the manifold, distributor cap and wires. The engine is a replacement that has 6000 miles on it. The compression reads 100-110 pounds. It ran well for awhile but it kept losing power and performance.

Chester L. Evans
Chet's Auto Service
Omaha, Washington

FIRST of all you will have to correct the distributor dwell. I would suggest installing a new plate, also make sure the fuel pump is all right. You might try using a new set of spark plugs of the proper heat range. If the above items are satisfactory then, about the only other thing to do is grind the valves and check for weak valve springs. Make sure there are no obstructions in the exhaust system and that the muffler is not clogged.

Distributor-Specifications Lincoln Double Diaphragm

Could you please supply us with distributor settings on the 1953
(Continued on page 142)



BODY SHOP TIPS

BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Petroleum Jelly Protects Shop Lights

By coating our sprayroom lights with petroleum jelly, the overspray that collects on them can be easily wiped off with a cloth. This precaution eliminates the need to clean them with thinner after the spray has hardened. Harry J. Miller, 991-42nd St., Sarasota, Florida.

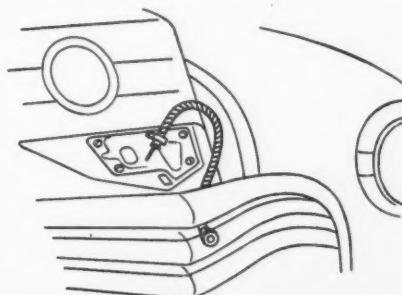
Masking Tape Helps Keep Hub Cap Tight

To prevent hub caps from turning and falling off most cars built after 1951, I use a piece of $\frac{1}{2}$ inch masking tape. I wrap the tape all the way around the wheel, then I

sharpen and straighten the hub cap tangs and install the hub cap. By doing this the hub cap tangs can bite into the tape and prevent the crunching noise that usually prevails and also keeps the cap from falling off. D. R. Murphy, Furr Motor Co., McKinney, Texas.

Discarded Cable Makes Simple Hood Release

Where a hood control cable becomes snarled or needs replacing, or where a regular hood cable assembly is not easily obtainable on

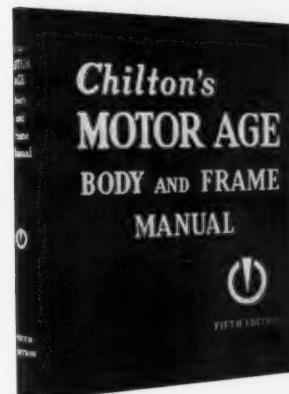


older model cars, a simplified one can be installed. Obtain a discarded vent cable, choke or throttle cable, cut off to the desired length to extend from the hood latch out through the radiator grille. Remove about three inches of the outside housing and fasten the free end of the cable to the hood latch. Extend the control end of the cable through the grille or fasten by a small

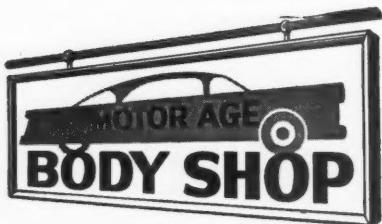
clamp under one of the grille bars. The hood can then be released from the front of the car like the later models. Gerald Marcinak, Hines Motor Co., Hogansville, Ga.

New Window Regulator Screws Prevent Sticking

Electrically operated windows on 1954 Pontiacs sometimes stick in the up position. To remedy this we replace all the Phillips screws that hold the regulator with $\frac{1}{4}$ inch cap screws. These can be pulled tighter and eliminate further trouble caused by the window striking the top and binding. Darrell Kear, Thompson Motors, Goodland, Kan.



Other valuable information of the type presented each month in The BODY SHOP is available in Chilton's Motor Age Body and Frame Manual.



Here's a shop that's proved a little imagination
used in sales promotion pays off in more business

Monkey Business

pays for JOHN'S
BODY
SHOP



A gift from the boys in the shop these monkeys have created a lot of publicity for John's body shop.



The first two-way car John built was made from two 1940 Plymouths. His newest creation is a combination of two 1948 Oldsmobiles. The wheelbase is slightly longer than a Cadillac and is powered by a rebuilt engine plus a new hydraulic transmission. It handles well on the road and meets all safety requirements.



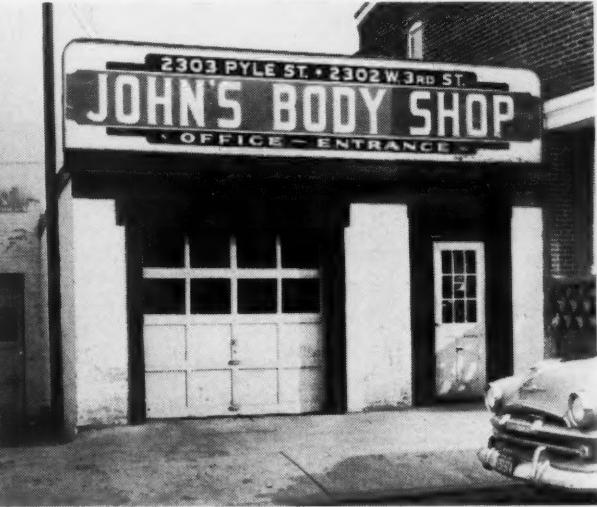
Shown discussing an estimate with a customer is John DeBonaventura, owner of this wide awake body shop which he operates in Wilmington, Del.



In this section of the shop straightening and spot finishing are done. In the background one car is being prepared for a minor touch-up job.



It's not unusual for John to have several cars waiting at the spray booth by mid-morning. Here one gets final touches before going through.



"Through these doors pass the best damn customers in the world" is John's philosophy. It's one reason why word-of-mouth is his best advertising.

ADDING glamour, humor and a spark of showmanship to an enterprise as humdrum as a body shop takes no small amount of imagination. Imagination and an eye for promotion are two qualities which have helped John DeBonaventura, Wilmington, Delaware, to expand his body shop to the stature of one of the largest in the east. Unusual promotion stunts help to attract attention and draw customers, John points out, but doing a good job at a fair price is what holds them and keeps them coming back.

A body man all of his working years, John opened his own shop nine years ago with one other man. He now has 26 men working for him and runs about 4,000 repair jobs through his shop each year. In addition, he has a seven

car body shop in Elkton, Maryland, which employs four men.

Every car and truck in John's "fleet" is repainted yearly in the company's colors, pink and green. Whether it be the wrecker, parts truck, service car or the double-ended Oldsmobile show car, John's eye catching colors always attract attention around town. What's more, they're always kept sparkling clean to leave a good impression with the townspeople.

One car which John doctored up to draw crowds was an old Pontiac on which the body was in fairly poor shape. John straightened and refinshed one side to perfection, putting on all new chrome moldings and restoring it to fac-

(Continued on page 124)

Up-To-Date Body Parts Price List

1954 Various Models

Buick, Series 40, 60

Hood Panel—1165677	65.00
Hood Ornament—1163703	9.25
Front Fender—1163880	52.00
Front Fender Lower Panel— 1163840	.75
Front Fender Skirt— 1163984, right	21.50
Front Fender Skirt— 1165011, left	29.25
Radiator Core—3131176, Ser. 40 D.F.	67.95
Radiator Core—3131177, Ser. 60 D.F.	80.30
Radiator Splash Pan— 1162801	7.50
Front Bumper Face Bar— 1163129	47.50
D.F.—Dynaflow	

Cadillac

Headlamp Assy.—5945088	10.84
Headlamp Door—5945022	7.96
Sealed Beam Unit—454643	1.84
Front Fender—3509699, right	73.50
Fender Baffle Plate—3509600	4.74
Fender Support—3508579	1.06
Fender Name Plate— 1459430	3.15
Hood Panel Hinge & Reinforcement—3630593	11.75
Hood Ornament—1460581	11.60
Hood Center Mldg.— 1460850	4.25

Chevrolet

Hood Top Panel—3705345	16.70
Hood Emblem—3705033	2.75
Hood Hinge—3697373, left	1.95
Hood Top Ornament— 3705035	4.95
Grille Upper Mldg.— 3705305	5.80
Grille Center Mldg.— 3705306	6.45
Grille Center Vertical Mldg.—3705313	2.55
Radiator Core—3130944	57.80
Front Fender—3704393	28.10
Fender Front Skirt— 3705107	5.80
Fender Rear Skirt— 3707847	6.95

Chrysler

Front Bumper Face Bar— 1533069	79.50
Bumper Outer Guard— 1550253	10.75
Hood Front Mldg. C64— 1541476	8.45
Lower Radiator Shroud— 1434736	2.73

Chrysler—continued

Radiator Core, 6 cyl— 1494022	83.00
Radiator Core, 8 cyl— 1494646	130.85
Radiator Yoke—1347310	10.60
Front Fender, 6 cyl— 1494994	57.25
Front Fender, 8 cyl— 1541004	62.50
Front Bumper Back Bar— 1533069	79.50

DeSoto

Hood Panel—1541463	60.30
Hood Name Plate, V— 1494038	3.15
Radiator Yoke & Shield, S20—1494945	2.70
Radiator Yoke & Shield, S19—1494948	2.90
Radiator Support Assy.— 1346660	5.68
Radiator Core Assy. S20— 1494022	83.00
Radiator Core Assy. S19— 1494647	114.70
Front Fender—1494665	46.85
Hood Hinge Assy.—1347366	7.75
Radiator Upper Side Shield—1541050	3.50
Front Fender Shield Upper Complete—1487092	8.40
Front Fender Shield Lower Complete—1328715	6.75

Dodge

Radiator Stone Deflector, D53—1489933	6.95
Front Bumper Face Bar Supt.—1485300	5.75
Front Bumper Face Bar D53—1329450	32.95
Bumper Buffer Plate, D50-1A—1324626	6.63
Radiator Core, D53— 1494020	85.85
Front Fender Up. Right Shield, D53—1409175	12.75
Front Fender Lower Right Shield, D53—1409176	12.75
Front Fender Side Mldg. D53—1541143	3.45
Hood Panel Assy. D53— 1541452	46.85
Hood Front V, D50-1A— 1541164	3.35
Hood Panel Lock Supt.— 1435272	2.95
Front Fender, D53 Right— 1541177	35.40
Front Fender Extension, D53—1541215	2.15

Ford

Back Window Frame—	
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Ford—continued

BA-7042208-A	8.70
Roof Inner Side Rail— BA-7351212-B	2.20
Inner Upper Pillar Assy.— BA-7002522-C	3.60
Hood Top Ornament— BM-16850-A	5.50
Windshield Glass— BA-7003100-B	52.60
Fuel Tank Assy.— AB-9002-G	20.00
Lower Back Panel— BF-7040320-A	11.50
Body Side Ornament— BM-7325652-A	2.40
Roof Side Ornament— BM-7050254-A	2.10
Complete vent, Window— BM-7021402-A	19.95
Front Door Glass— BA-7021410-A	8.50
Door Window Finish Strip— BA-7020904-DP	13.52

Hudson

Front Bumper Face Bar— C-240239	34.35
Front Bumper Guard— C-240878	8.50
Front Bumper Back Bar— C-2400086	13.20
Parking Lamp Assy.— BO-240920	5.50
Grille Upper Mldg.— C-240020	18.50
Grille Outer Center Mldg.— C-240017	14.75
Grille Lower Mldg.— C-240016	20.00
Grille Kit—A-241299	94.90
Grille Lower Baffle Assy.— A-240010	2.50
Grille Center Baffle Assy.— A-225164	1.60
Grille Front Ornament— BZ-240090	12.75
Radiator Core Mounting Channel—C-240807	7.50
Reinforcement Hood Front— A-225056	4.50

Lincoln Cosmopolitan

Fuel Tank Assy.—LA-9002-J	26.75
Headlamp Door— FAB-13052-B	3.90
Front Fender Ornament— BD-16178-A	2.80
Windshield Glass Assy.— BD-7303100-C	56.10
Front Door Vent. Frame & Glass—BD-7322206-A	8.75
Rocker Panel Mldg.— BD-7310176-A	11.48
Front Fender Mldg.— BS-16003-A	5.15

New PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING NEXT PAGE

151 Repair Kit

Lee Tire & Rubber Co.: A new type repair kit for tubeless tires has been placed on the market under the trade-name "Swift-Seal." This kit, which does not require removal of the



tire from the rim, will make up to 50 tubeless tire repairs. It contains a sealing gun filled with special rubber compound, rubber plugs, cement-lubricant and an inserting rod. For puncture holes up to $\frac{1}{8}$ in. the repair is made by inserting the sealing compound into the hole filling it completely. For holes larger than $\frac{1}{8}$ in. the rubber plugs supplied with the kit are inserted into the hole to seal it, according to Lee.

152 Torque Adaptors

Owatonna Tool Co.: A complete line of head bolt torquing adaptors is now available from OTC. Twelve wrenches designed to fit head bolts on Ford, Lincoln, Buick, Chevrolet cars, Mac, International, Ford and Chevrolet Trucks and Massey-

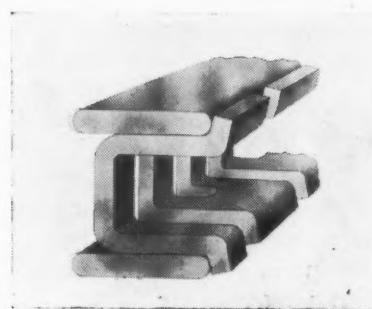
Harris and Minneapolis-Moline tractors as well as Buda engines permit access to head bolts for torquing purposes. These wrenches are said to clear rocker arms and other obstructions where necessary to reach every head bolt.

153 Oil Ring

Perfect Circle Corp.: A self-expanding oil ring, which combines the spring and spacer in



one piece is known as the "98" oil ring. Designed to provide even distribution of pressure throughout its circumference, the new oil ring has 110 individual

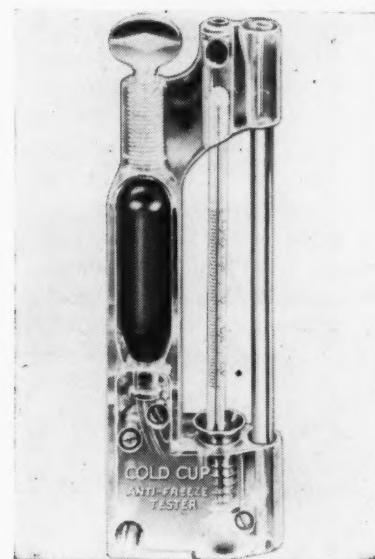


individual springs ($3\frac{1}{2}$ in. diam.) exerting side and radial pressure against chrome plated rails to effectively seal the sides

as well as the face of the ring, the maker states. Its extreme flexibility assures uniform contact in irregular cylinders, both tapered and out-of-round, and is equally effective in conventional and bottomless piston grooves. Maximum oil drainage is said to be provided by the "98" and the constant movement of each spring retards the accumulation of carbon.

154 Anti-Freeze Tester

Rolf Darbo Enterprises: The correct "safe" temperature for anti-freeze solutions can be determined instantly by a new pocket-size anti-freeze tester,



the Cold Cup. Freezing a thimbleful of anti-freeze with dry ice from a CO₂ fire extinguisher permits the reading of the safe temperature on a thermometer

(Continued on page 60)

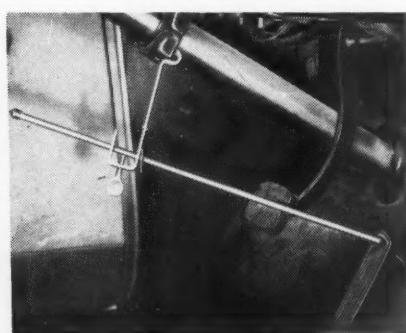
New Products Continued from Page 59

immersed in the solution. The unit is said to test any type of anti-freeze or any mixture of alcohol and permanent anti-freeze with the engine cold or warmed up. No charts of any kind are needed.

155

Accelerator Depressor

John Bean Div.: A detachable accelerator pedal depressor to hold engine R.P.M. at any desired



level is being marketed by this maker. Designed primarily for motor tune-up and rear wheel balancing, the depressor is easily attached to a steering column bracket or dashboard and is fully adjustable from idle to full throttle setting, according to the maker.

156

Paint Remover

The Wilbur & Williams Company: Blister-Off spray paint remover is said to cause hundreds of tiny "blisters" to form on paint when applied, which rise completely and cleanly from the surface, ready to be wiped or scraped off. One application is all that's needed except for exceptionally stubborn cases, the manufacturer states.

157

Distributor Tester

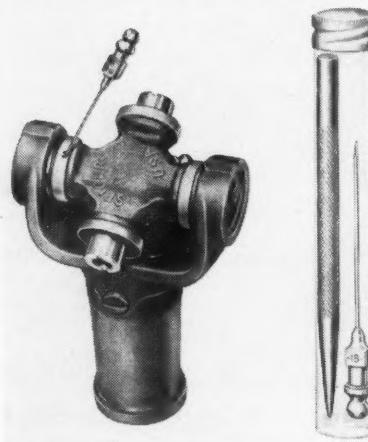
Allen Electric & Equipment Co.: A new Synchrograph Distributor Tester which operates from 115 volt A.C. current, thereby eliminating the need for a storage battery or trickle charger, has been announced. All 6- and 12-volt distributors can be accurately tested with this new Synchrograph, ac-

cording to Allen, and it features a new mechanical variable speed drive which eliminates fluctuations in R.P.M. The exact firing point of all cylinders, at varying speeds and vacuum advance, is shown by a stroboscopic neon indicating arrow in a large protractor ring. Up-to-date distributor specifications are furnished with the new tester.

158

Greasing Kit

Atmars Tool Co.: With the "Ezee" U-Joint greasing kit drive shaft universal joints can be lubricated in about 7 minutes, without removing or disassembling them from the shaft, the maker claims. The kit consists of a sharp prick punch and a grease injector needle. To use, a hole is in the outer metal shell of the



joint, then the needle is inserted through the hole. The grease gun is attached and operated.

159

Lathe Accessory

Frank N. Wood Co.: A "Double Cup Center" is now available for use with the Trucut armature lathe and undercutter, when turning late model Ford Motor Company armatures. These armatures are designed with a short shaft on the commutator end, and can not be chucked up and machined in the usual manner. The "Double

Cup Center" is said to make it possible to machine these new style armatures. With the "Double Cup Center," the ball bearing may be left on the commutator end of the shaft.

160

Tune-Up Tester

Sun Electric Corp.: Volt ignition, vacuum pressure, tach-dwell, and electronic distributor testers are mounted, as a unit, on a roll around stand which provides space for tools, reports and manuals. The unit is designed for six and twelve volt operation and is built with automatic change-over relays so that the unit cannot burn out, it is stated. Each tester is available individually or as part of the complete unit.

161

Trim Protector Remover

Woodhill Chemical Co.: This company has marketed a chrome protector remover that is said to quickly remove most makes of chrome protectors including alkyd and acrylic base materials. The remover, which is brushed on, is of heavy viscosity permitting adherence to vertical surfaces without sag. The old protector blisters in a short time and the chrome then can be wiped clean with a damp cloth, according to the maker.

162

Gear Oil Supplement

Moly Motor Products, Inc.: Liqui-Moly Gearlube Booster is a product that is added to the regular gear bearing and chassis grease. It gives extra lubrication and protection for gear teeth and other friction surfaces, the maker



states. According to the company, the gear-lube booster provides a plating for these surfaces that is heat and acid resistant. The Supplement is available in tubes or quart cans.



The Inquiry Card—How It Works

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

When you want more free information on any of these products, simply mark a circle around the same number on the postcard as appears under the item described. You may circle as many items as you wish. Use either or both cards. Separate information will be sent to you on each item. Be sure to give your full name and address.

New Literature

163. Oil Filter Chart

Purolator Products, Inc.: A new type specification chart for dealers, providing complete installation data on oil filter refills for all 1955 cars and light trucks has just been issued by this company. The specification chart features a special dealer's quick stock check. The amount of stock which an average dealer should carry is worked out for him on the basis of the national popularity of each filter type indicated. In addition, the chart gives foreign car refill specifications.

164. Brake Lining Film

Raybestos Div. of Raybestos-Manhattan, Inc.:
"Seven Steps to Safety" is a new half hour
(Continued on next page)

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.
Please send me further information on the New Products, the code numbers of
which I have circled below.

3/55

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.
Please send me further information on the New Products, the code numbers of
which I have circled below.

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|------|-----------------------|------|--------------------------|
| 151. | Repair Kit | 163. | Oil Filter Chart |
| 152. | Torque Adaptors | 164. | Brake Lining Film |
| 153. | Oil Ring | 165. | Car Conditioning Book |
| 154. | Anti-Freeze Tester | 166. | Test Specifications |
| 155. | Accelerator Depressor | 167. | Tubeless Repair Bulletin |
| 156. | Paint Remover | 168. | Parts Catalog |
| 157. | Distributor Tester | 169. | Headlight Dimmer |
| 158. | Greasing Kit | 170. | Service Jack |
| 159. | Lathe Accessory | 171. | Reamer |
| 160. | Tune-Up Tester | 172. | Mower-Starter |
| 161. | Trim Protector | 173. | Power Mower |
| 162. | Gear Oil | 174. | Adhesive Kits Supplement |
| | | 175. | Parts Supplement |
| | | 176. | Undercoating Tank |
| | | 177. | Tubeless Tire Valve |
| | | 178. | Line Anchor |
| | | 179. | Light Stand |
| | | 180. | Rust Remover |
| | | 181. | Battery Clamp |
| | | 182. | Camber Tool |
| | | 183. | Idler Arm Take-Up |
| | | 184. | Voltage Regulator |
| | | 185. | Tire Cleaner |
| | | 186. | Soldering Iron |
| | | 187. | Welding Shields |
| | | 188. | Bead Breaker |
| | | 189. | Plier-Cutter |

Your Name Your Title
Your Company
Your Business: Wholesaler Repair Shop Car Dealer
Address (Street & No.) (City) (Zone) (State)

..... Your Title.....
our Name.....
our Company,
our Business: Wholesaler, Repair Shop, Car Dealer,
address, (Street & No.) (City) (Zone) (State)

New Products

Continued from Page 61

color film presenting the story of brake lining. Westbrook Van Voorhis, of March of Time fame, is narrator and one of the principle actors. Non-technical in approach, it gives brake servicemen factual information to help them in selling quality brake relining jobs. It shows the amount of research and development behind the production of high-grade brake lining and dramatizes the importance of the jobber in the chain of distribution.

165. Car Conditioning Book

Minnesota Mining and Mfg. Co.: A booklet suggesting cost-saving in renewing the appearance of used cars has been compiled by this firm. Called the "3M System for Controlled-Cost in Appearance Reconditioning", the 24-page booklet has 10 major sections, which make step-by-step recommendations for various phases of body repair.

166. Test Specifications Booklet

Delco-Remy Div. of GM: This company has published the 1955 edition of the DR-324S Test Specification booklet. This booklet has been revised to include the most recent specifications for all active models of Delco-Remy batteries, coils, distributors, generators, cranking motors, regulators and magnetic or solenoid switches.

167. Tubeless Repair Bulletin

Monkey Grip Sales Co.: This company has released a 4-page bulletin on tubeless tire repair equipment and materials. It gives complete information on "plug the hole" vulcanizing patch method of tubeless tire repairing. Illustrations and instructions show how the hole is plugged by using vulcanizing patches with filler tabs to supply the rubber that plugs the hole.

168. Parts Catalog

J. C. Whitney & Co.: A 148 page catalog of automotive parts and accessories at wholesale prices has been published by this company. Over 50,000 automotive items are cataloged, including replacement items for cars from 1920 to 1955 models; new Hollywood style accessories; and equipment to "soup up" engines.

(Continued on page 128)

BUSINESS REPLY CARD
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

FIRST CLASS
PERMIT No. 36
Sec. 34.9, P. L. & R.
New York, N. Y.

BUSINESS REPLY CARD
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

FIRST CLASS
PERMIT No. 36
Sec. 34.9, P. L. & R.
New York, N. Y.

POSTAGE WILL BE PAID BY

Chilton's MOTOR AGE

P. O. Box 76,

Village Station,

New York 14, N. Y.

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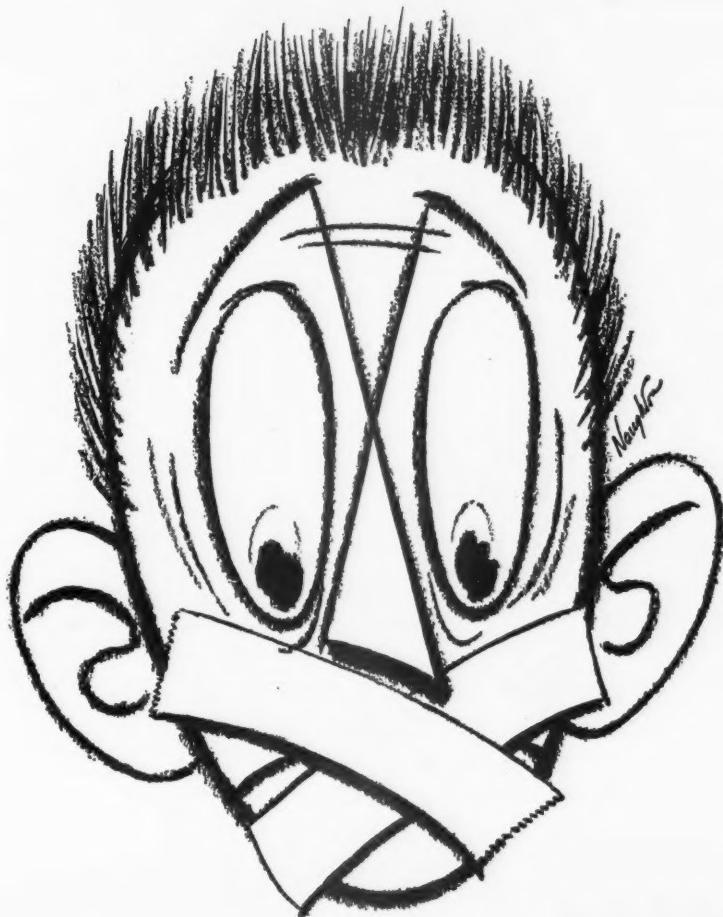
Village Station,

New York 14, N. Y.

One to Remember

(FOR YOUR BULLETIN BOARD)

**Most of us know
how to say NOTHING..**



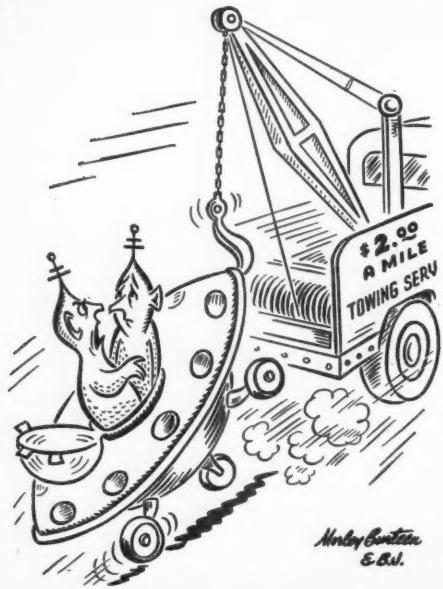
Few of us know WHEN!



"I never got over the fact that I flunked out in Medical School."



"I'll drive!"



Murphy Carpenter
E.B.I.

"So, you told him to tow us home! Now tell me how we're gonna pay the \$71,000,000.00 towing charge!!"



"Henry, dear—would you look out in the garage and see if I took the car tonight . . . "



For old dealers! For new dealers! Studebaker means new opportunity!

Studebaker's electrifying new progress is just a sample of what's coming

YOU can see the pay-off result of Studebaker's tremendous expansion program in the profit-packed action that Studebaker dealers are getting.

Why not cut yourself in for a sizable share of this electrifying progress that Studebaker is making? Swing into a proud place of your own in the surging new Studebaker success parade.

New dealers and old dealers agree that it's both

inspiring and profitable to be teamed up right now with alert, fast-moving Studebaker—America's Friendliest Factory. Read the two statements below and learn why.

A number of good points for the right kind of Studebaker representation are open. Address General Sales Manager, Studebaker Division, Studebaker-Packard Corporation, South Bend 27, Indiana.



"We're out to top all records!"

"We have been representing Studebaker in the Atlanta area since 1917. Prior to that, for several years, we had a successful Studebaker dealership in Griffin, Ga. We have had great years, great cars and great support from Studebaker in the past. But never has the prospect been so bright for us as right now."—L. B. Yarbrough, President, Yarbrough Motor Co., Atlanta, Georgia.



"We know we picked a winner!"

"The moment we signed up with Studebaker we found ourselves receiving 'very important person' treatment. I like that kind of interest and the sincere friendliness that begets it. I feel certain that acquiring my Studebaker dealership will prove the best business move I ever made."—J. D. Macdonald, 135 West Fifth Street, Eureka, California.



STUDEBAKER

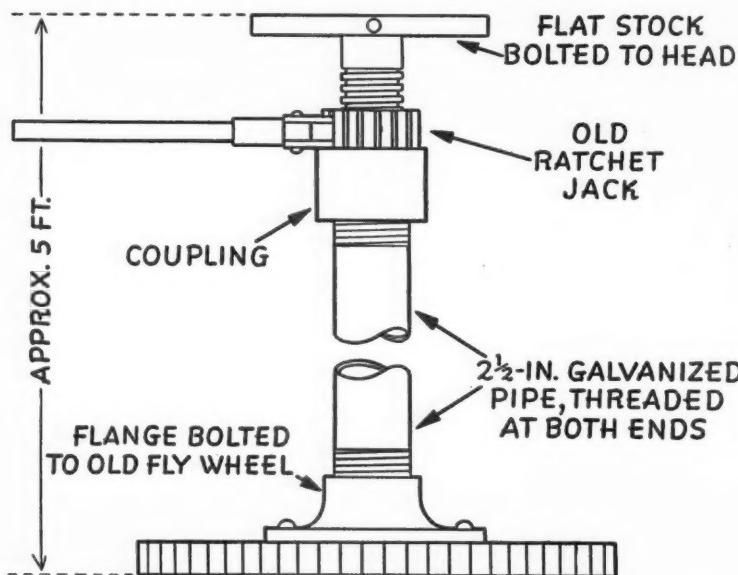
Studebaker Division of the Studebaker-Packard Corporation...world's 4th largest full-line producer of cars and trucks



If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

\$25

Spare Parts Around the Shop Make Good Lift Jack



We designed a handy jack to use when a car has been hoisted up on a lift. We use a $2\frac{1}{4}$ or $2\frac{1}{2}$ inch pipe threaded on both ends, 5 ft. long. A flange is screwed on one end with a discarded flywheel bolted to it. On the other end a coupling and ratchet jack is attached to complete the job. William Watson, c/o DeSoto & Plymouth Dealer, Broadway, Westwood, N. J.

Method Found to Secure Rear Tail Pipe Bracket

I have found that the nut which supports the rear tail pipe bracket on 1949 through 1951 Nash cars is bradded into body metal and is prone to work loose and rattle and eventually break out. Welding is unsatisfactory as they soon break around the edge of the weld, so here is what we have done on recent jobs. First, we knock out the old nut, drill a $\frac{3}{8}$ hole in the middle of a piece of $\frac{1}{8}$ flat iron one inch wide by two inches long, Insert a $\frac{3}{8}$ SAE bolt one inch long in the hole and braze the head to the iron. With a sharp chisel we split out the existing hole, which is about a foot to the right of where the bracket mounts, until the iron with the bolt brazed to it will go through. Then with a wire fastened to the bolt draw it through this hole across and down into the original bracket hole. Install a large flat washer over the bolt, install bracket and tighten, and it's there to stay. Victor McGee, L. E. Dick Motor Co., 415 N. 7th St., Mayfield, Ky.

Makes Handy Light To Locate Shorts

I've made a handy tool that helps in locating minor shorts in the electrical circuit of an automobile. It is made from a foot of 12 gage wire, 2 clips and a No. 63 bulb and socket. Solder one clip to the socket and the other on the wire
(Continued on page 68)

For dependable, LOW COST engine overhauls, use



**Peak performance
assured with:**

- ① **2-in-1 CHROME PISTON RINGS.** Both TOP ring and OIL ring are plated with thick, solid chrome, giving complete wear protection where heat is highest, pressure greatest, lubrication poorest!
- ② **NURLIZING.** Restores worn pistons to correct fit quickly, accurately and permanently, for only a fraction of the cost of new pistons.
- ③ **STEEL TOP RING GROOVE SPACER.** Precision-made to compensate for increased groove width and to retard top ring and ring groove side wear.
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- ⑤ **PLASTIGAGE.** Bearing clearances are quickly and accurately checked, in as little as one third the time required by older methods!
- ⑥ **TAPER SHIM BEARING ADJUSTERS.** Custom-made to correct excessive clearance in main and connecting rod bearings.

*** Perfect Circle POWER SERVICE**

Yes, here is the safe, sure and profitable way to stretch dollars and miles when an engine needs an overhaul! By using Perfect Circle's *low cost* POWER SERVICE you can assure your customers complete satisfaction and give them thousands of *extra* miles of sustained power and positive oil control! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

Perfect Circle
PISTON RINGS

The Brand Most People Prefer

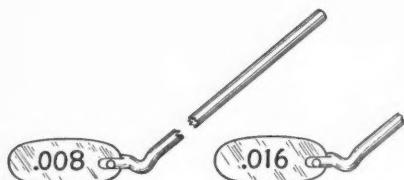
Shop Kinks

Continued from Page 66

end. To use I disconnect the hot lead from the battery and clip the tool in place. Put one clip on the battery post, the other on the disconnected lead. With all the accessories turned off, and the ignition switch off, there should be no light in the bulb. If the bulb is lit, then a short or a leak in the hot lead is present. There should be no light in the bulb when you have repaired your trouble. *Andrew Foglia, Neil Motors Co., Woodland, Wash.*

Handy Feeler Gage Holder Prevents Burned Hands

To keep oil from running on the manifolds and on your hands, while adjusting the valves on the 1955 Chevrolet V-8 conventional engine, I made these two gages. One .008 and one .016. The handles are made of eight inch lengths of 3/16



inch welding rod. The blades are of $\frac{1}{2}$ inch feeler stock cut $1\frac{1}{4}$ inches long. First I split the rod $\frac{1}{4}$ inch with a hack saw, then I drill a $\frac{1}{8}$ inch hole to rivet the blade to the handle. Then I bent a dip or offset in the rod to let oil run down into the valve chamber. Finally I bent the handle so the blade will be on a 45 degree angle. *Howard McKee, Kane Chevrolet Co., DeSoto, Mo.*

Simple Way to Remove Broken Water Pump Bolts

I have found a simple method for removing broken bolts from inside the lower hose connection of the water pump. After removing the pump from the engine, I lay a $\frac{3}{8}$ steel nut on top of the broken stud. With an old pair of pliers to hold

the nut steady, I electric weld it to the top of the broken stud, working the welding rod through the hole in the nut. The nut will not stick to the pump casting and the heat from welding tends to loosen the bolt. While it is still hot I use a wrench to turn the stud out. *Leonard Haliburton, Jr., 901 S. 5th St., Milbank, So. Dakota.*

Idea Saves Time in Replacing Heat Tubes

Here is a time saver when replacing the heat tube for automatic chokes in Oldsmobile V-8 engines. With a 5/16 SAE tap I tap threads inside the tube. Then with a long 5/16 SAE thread spring bolt I run a nut well up on the threads and slip an old wrist pin or similar sleeve over the bolt for the tube to enter when it is pulled from the manifold. Then I screw the bolt into the choke tube and tighten the nut against the sleeve. As the nut is tightened the choke tube is pulled from the manifold without the manifold being removed from the engine. *Leon A. Webster, Webster's Repair, Currie, Minn.*

Tip for Replacing Timing Cover on Olds

We've had trouble replacing the timing cover on an Oldsmobile rocket engine without pushing the rubber oil seal, on the front of the oil pan, out of place. We do it without loosening the oil pan by removing the two dowel pins in the block. Then set the cover in place, line it up with drift pin and install the attaching bolts. Then replace the dowel pins from the outside of the cover. Using this method it is not necessary to jack the car up. *Mickey Walker, RD No. 3, Ravenna, Ohio.*

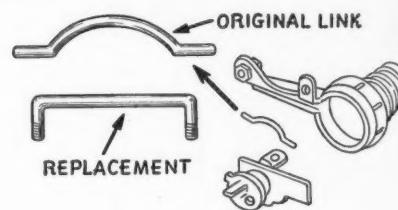
Lubricant Will Stop Steering Column Squeak

If a squeak should develop in the

steering column of a car equipped with Chrysler Power Steering, of the type built prior to the new Co-Axial unit, its source is usually the horn wire contact brush located half way down and on the top side of the column. This can be verified if the noise disappears by lifting up on the spring loaded contact, while at the same time turning the steering wheel. Remove the two screws holding the contact plate to the column and put a good lubricant on the end of the brush, also on the brass collector ring mounted on the shaft. *J. R. Lewis, 522 Powell Ave., Clark's Summit, Pa.*

Fastening Neutral Switch Link on 1954 Lincoln

On cars that are equipped with power steering there is only a double bend to hold the neutral switch link in place. Consequently, some of them work loose causing the entire starting system to go out. The floor carpet and a lot of sheet metal ordinarily must be removed to reconnect the link. I've devised a tool to eliminate this extra work. I bent a short length



of $\frac{1}{8}$ inch rod into the shape shown in the sketch, making sure the bends were the same distance apart as those of the original link. Using a 6 x 24 machine screw I die cut about three threads on each end of the newly formed link. Then I installed the new link and started a 6 x 24 nut on each end. If the threads have been cut properly the nuts will bottom on them and won't come off to let the link work out. All this takes only slightly longer than to connect the original link and has the advantage of ending the trouble forever. *Lynn F. Snoddy, 1622 Vivian St., Shreveport, La.*



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featuring these Nationally
Advertised Brands of genuine quality



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who supply the automotive repair trade from coast-to-coast with these—and many other—nationally advertised brands of quality automotive parts and supplies.

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Allied-A.P.C. Two-Metal Exhaust Valves are the greatest value you can offer your customers at any price. Conventional and rotating types—Stellite-Faced—Sodium-Filled. Engineered and built to highest standards of accuracy. Install with Allied-A.P.C. Guides, and Allied-Raymond Valve Springs and Locks for efficient performance, long life and customer satisfaction.

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You'll handle every reline quickly, safely, profitably, with American Brakebloc, known and respected for over 25 years as America's Safety Brake Lining! Boxed attractively and clearly identified, it comes precision-made in axle sets for every motor vehicle. It is available *bonded*, or *riveted* for all cars and light trucks; in *thick blocks* for all heavy-duty service.

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Switches are like razor blades. You forget about 'em when you're not using them. That's why this Balkamp Plexiglas Display helps you sell so many switches. *People see them!* Shows 14 of the most popular switches of these types: Heater, Toggle, Ignition, Push-Pull, Door, and Horn-Button. Ask for Balkamp No. 31A Switch Display Assortment.

BALKAMP, INC. • INDIANAPOLIS, INDIANA



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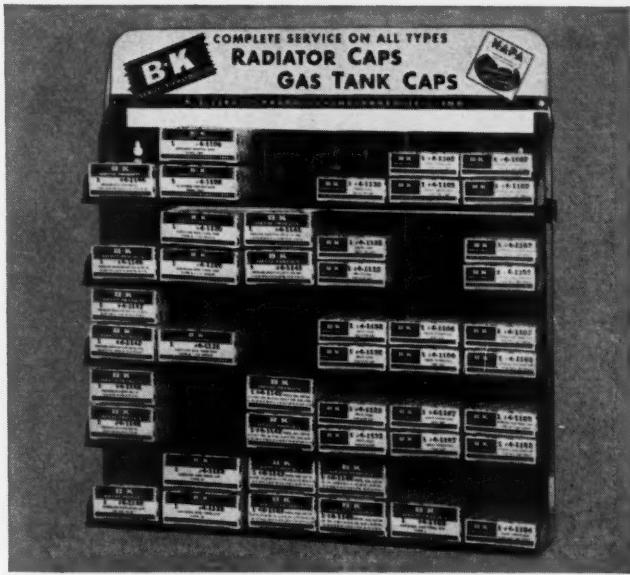
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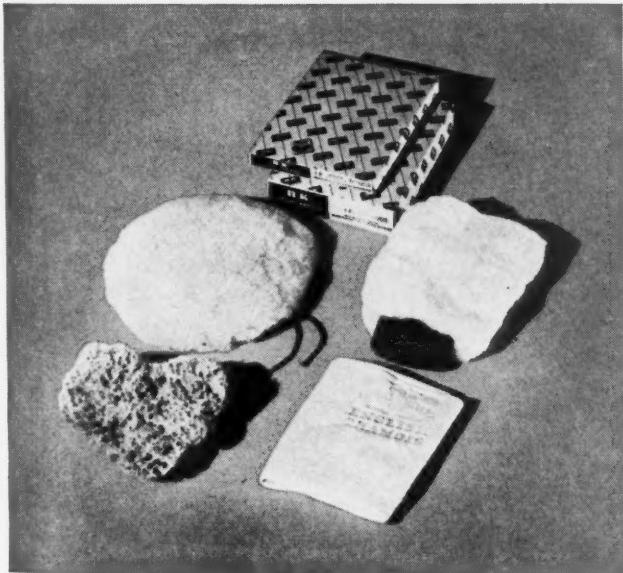
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Gas tank and radiator caps get lost, and have to be replaced, with amazing regularity. B-K's Display Merchandiser Assortment gives complete coverage for cars and trucks, with a minimum quantity of caps. Contains 17 Regular Gas Caps; 6 Locking Gas Caps; 7 Regular Radiator Caps; and 15 Pressure Radiator Caps. Ask for B-K Display Assortment No. 4-1100.

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B-K Huffman Service Station Equipment

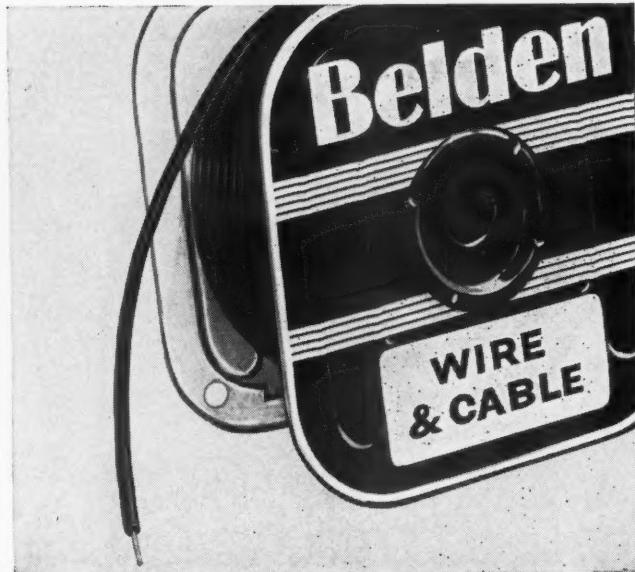
NAPA jobbers are ready to supply the finest in service station equipment . . . B-K Huffman. When you select your next new equipment, choose with confidence the brand that has a proper unit for every service station need . . . for every seasonal need. Choose B-K Huffman and rest assured that you have obtained the best.

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Use Belden—the Wiring Line that's complete for all service jobs—easy to stock—at a surprisingly low investment. Easier application means faster replacements. Belden Wire and Cables are engineered for modern cars, trucks, and buses—the line most servicemen use. Ask your Jobber Salesman.

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Bridgeport Tire Valve Inserter Free!

The new Bridgeport #506 Valve Inserter, tested and proved as the *best* service tool on the market for all Snap-in tubeless tire valves is free with your order for 12 boxes (5 each) Bridgeport #165R Snap-in Tubeless Tire Valves. Ask your jobber for details of this remarkable offer. Limited time only. Act Now!

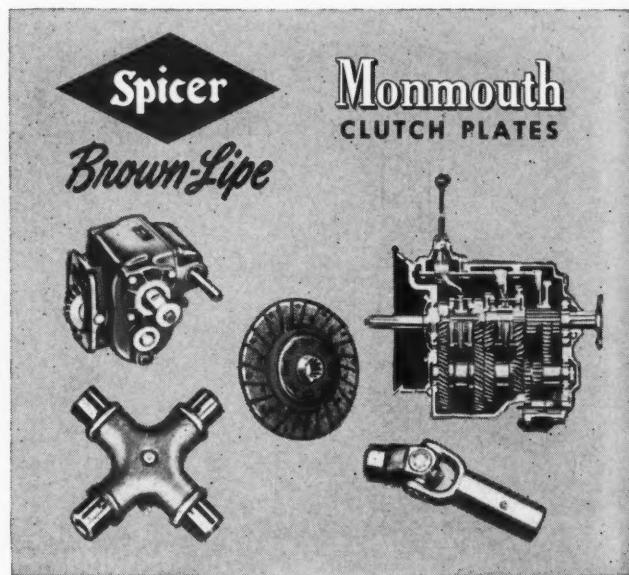
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Celoron® Timing Gears

There are reasons why good mechanics insist on using genuine Celoron Timing Gears. Made to original equipment standards, Celoron gears have high tooth strength, run smoothly, are easy to install. Customers know that the *laminated rim* of an individually molded Celoron gear gives better timing, longer life. Install the best in timing gears—order Celoron from NAPA!

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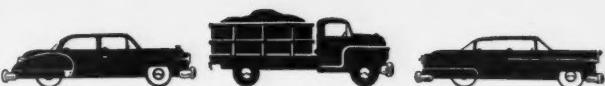
One or more Dana-made Products are in practically every automotive vehicle on the road: Spicer and "Mechanics-Type" Universal Joint Replacement Kits; Spicer "Brown-Lipe" Transmissions; Spicer Power Take-Offs and PTO Joints; and Monmouth Clutch Plates. Available through NAPA jobbers. For your profit and customer satisfaction, use DANA products.

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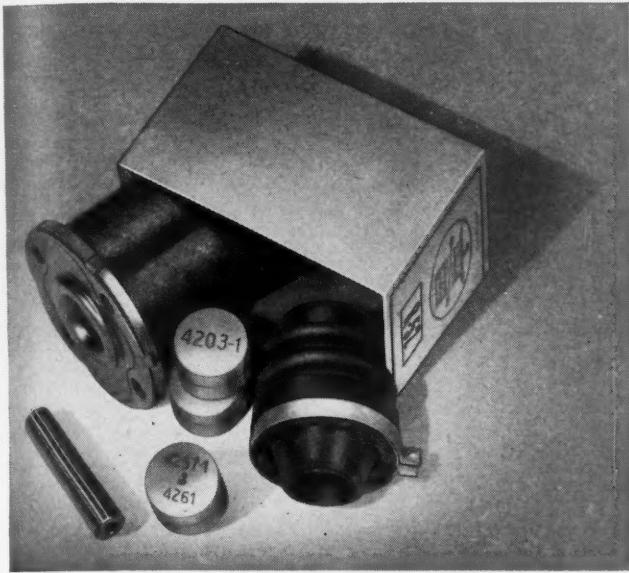


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Transmission Gears and Shafts have been keeping cars and trucks in operation since 1919. "Second to None" quality; Easy-to-Work-With Catalog; attractive safety cartons, distinguish this line. Illustrated instruction sheets, tags, etc., in many gear cartons are of real help to the repairman. This Company is Owner-Managed. See your NAPA Jobber!

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VISUMATIC • Visual stock control • Room for expansion • Perpetually balanced stock • Annual modernization • Guaranteed against obsolescence • The part you want when you want it—

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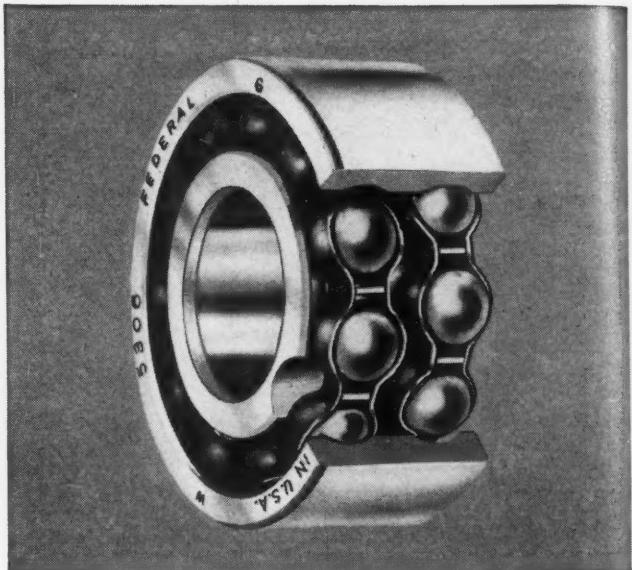


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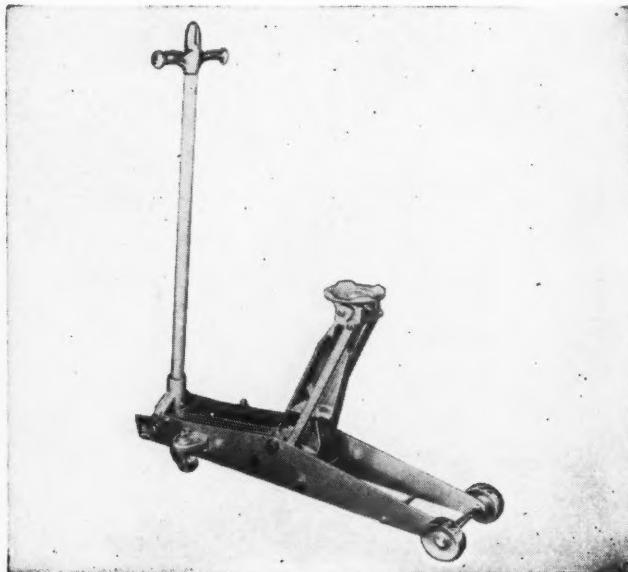
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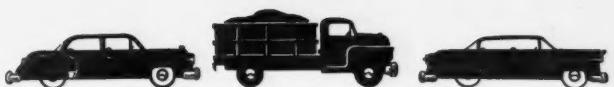
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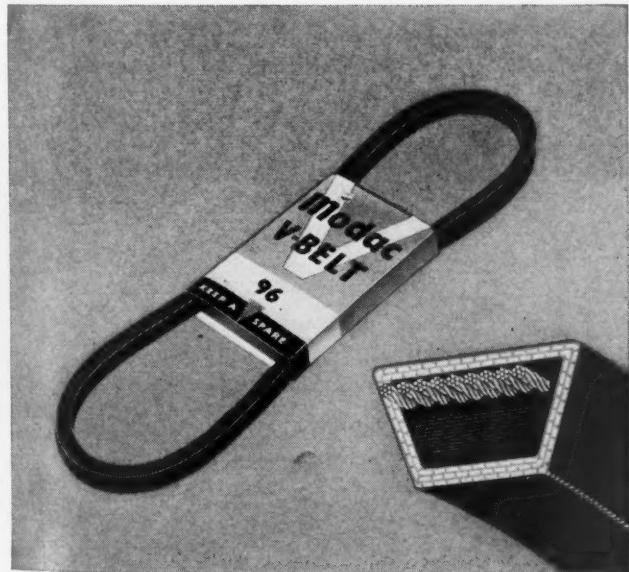
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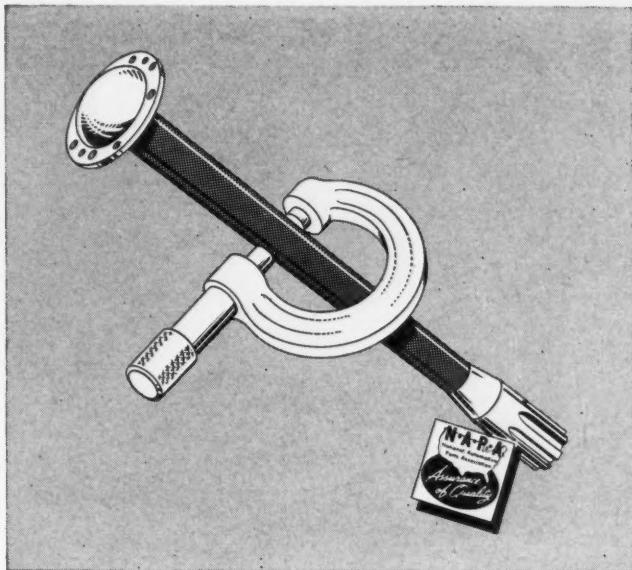
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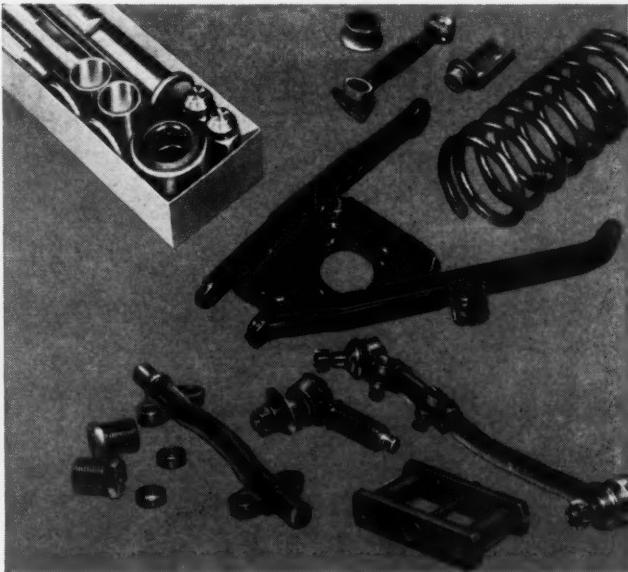
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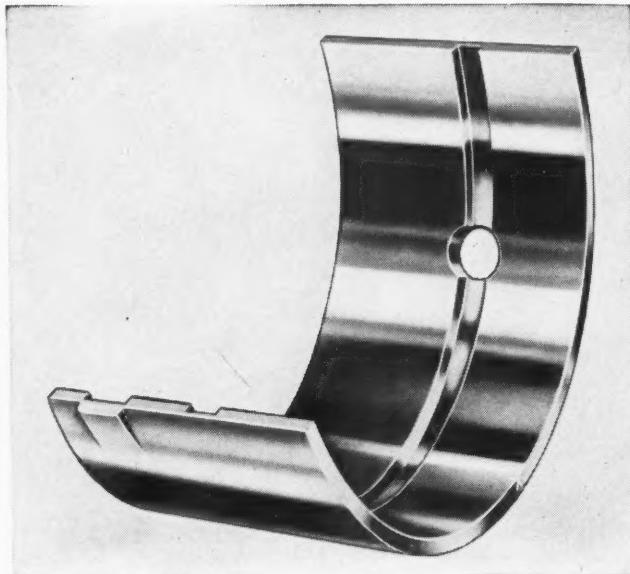
In Allied-Monmouth Chassis Parts, your NAPA Jobber offers a complete line engineered and built to original equipment standards in materials and tolerances. Includes Wheel Suspension Parts, Coil Springs, Steering Parts, King Bolt Sets, Shackles, and Ball-Joint Suspension replacements. Make your NAPA Jobber your headquarters for Chassis Parts.

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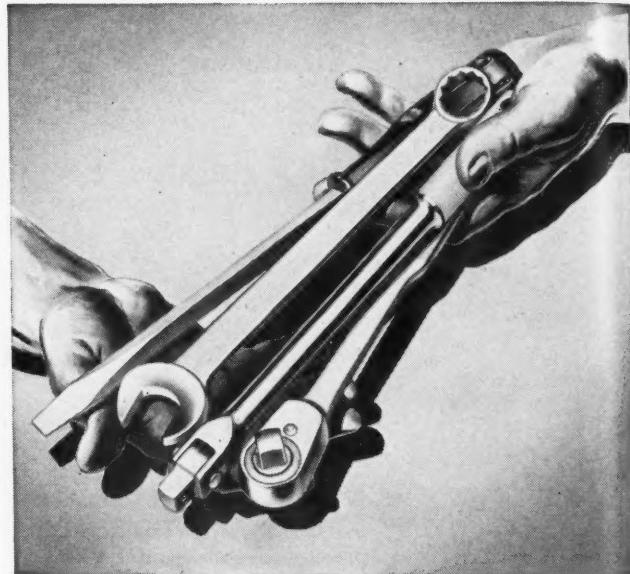
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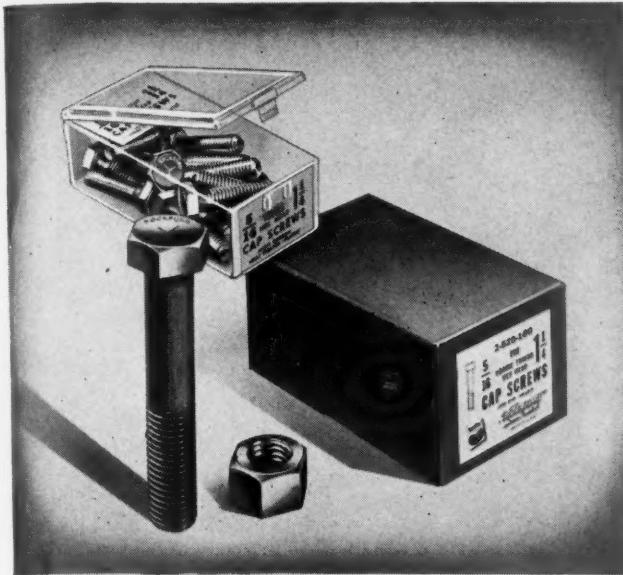
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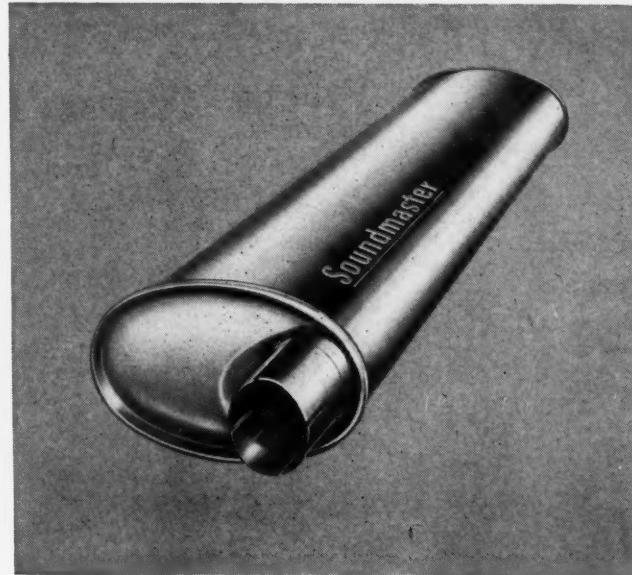
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With Rockford's new "E" line, NAPA Jobbers are in position to give you service on a complete line of quality fasteners of all types—cap screws, nuts, round and flat-head machine bolts, cotter-pins, washers, etc. Order in the hinged-cover clear plastic boxes for fast, easy identification and stock control; in the Rockford Standard Pack for full coverage.

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For each make and model you service, your NAPA Jobber can supply a Soundmaster Triple-Fit Muffler engineered to fit that car—all three ways. Mechanical Fit, for fast high-profit installations. Acoustical Fit, for full-range noise control. Horsepower Fit, for low back-pressure and high engine output. Next muffler job you have, use Soundmaster!

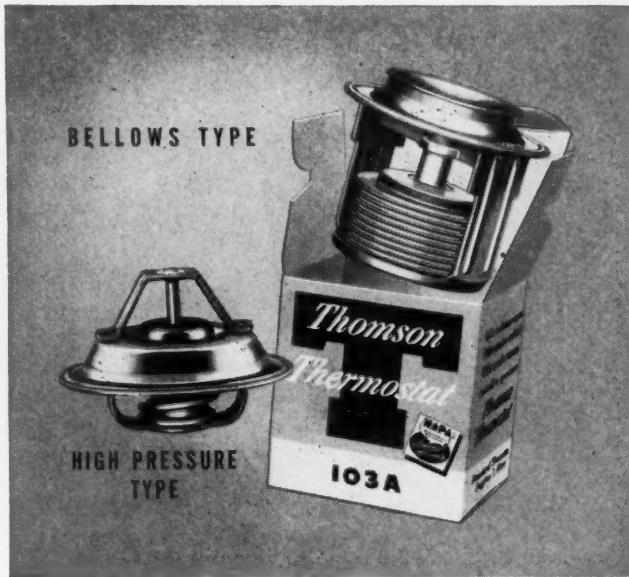
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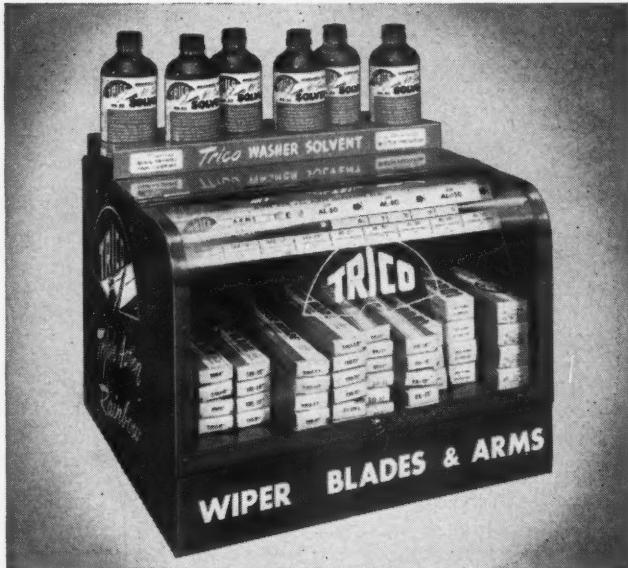
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"Save lives in '55" is focusing more attention than ever on windshield wiper blades. And this eye-catching Trico Cabinet with its new Vis-u-lid is stepping up sales of arms, blades and solvent for thousands of dealers. Put a Trico Stock Organizer Cabinet to work for you. Right now, with the big season just ahead, your NAPA Jobber has a special offer for dealers who have not yet installed one of these sales-makers.

TRICO PRODUCTS CORPORATION • BUFFALO 3, NEW YORK



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UNITED Hydraulic Brake Parts are replacement engineered and specifically designed to completely restore the hydraulic brake system to peak operating efficiency.

Automotive servicemen the world over have dependably applied UNITED brake parts for over a quarter century. Use UNITED. Your NAPA jobber features this brand.

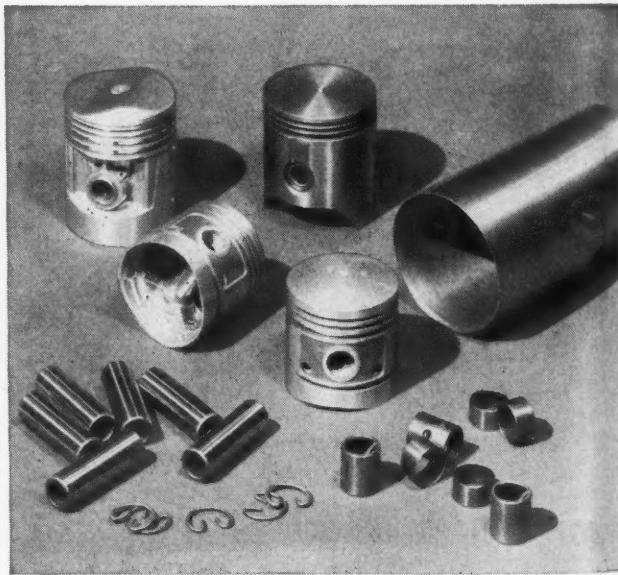
UNITED PARTS MFG. CO. • CHICAGO, ILLINOIS



Visall Safety Products

Dependable, easy to install turn signals. Visall 631 switch with engineered delayed self-cancelling. Visall 581 Class B light for maximum economy. Visall 531, 532 Class A with Lucite plastic lens. Visall 561 Class A with glass lens for heavy investment vehicles. Reflectors, flares, passenger car mirrors, truck mirrors, truck lights. Proven in service, approved in all states.

VEHICLE PRODUCTS COMPANY • CINCINNATI, OHIO



Allied-Wisconsin Pistons and Sleeves

For cars, trucks and tractors, look to Allied for the finest in pistons, sleeves and sleeve assemblies. Made to engine manufacturers' specifications as to material, design and weight, the broad Allied line includes *all piston types used as original equipment!* Install with Allied-Precision Micro-Matched Piston Pins for a perfectly balanced job.

ALLIED MOTOR PARTS COMPANY • DETROIT, MICHIGAN



NAPA "PARADE OF PARTS" (continues)

Current Passenger Car Price, Weight and Body Table

**Following are prices at factory for cars with standard equipment as of February 23, 1955.
State or local taxes, transportation and finance charges and optional equipment are extra.**

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	
BUICK					DE SOTO:					KAIER					PACKARD (Cont)					
Special 40	2035	198	2233	3695	Firedome-S22	Sedan, 4d.	2268	185	2453	3870	Special Club Sedan	2141	193	2334	3210	Packard	3728	312	4040	4275
Sedan, 2d.	2090	201	2291	3725	Spec. Coupe	2308	188	2496	3810	Sedan, 4d.	2192	197	2389		Patrician, 4d.	3766	314	4080	4250	
Riviera	2128	204	2332	3700	Sportsman	2413	196	2609	3805	Manhattan	2404	213	2817		Coupe, 2d.	133	133	1712	3089	
Conv. Coupe	2369	221	2590	3805	Convertible	2571	208	2779	4010	Club Sedan	2453	217	2670	3375	Caribbean, 2d.	162	133	1755	4755	
Ext. Wagon	2726	248	2974	3920	Sta. Wagon	2893	232	3125	4185	Sedan, 4d.	3368	300	3668							
Century 60					Firefly-S21	Sedan, 4d.	2481	201	2682	3940	Darrin	3368				PLYMOUTH:				
Sedan, 4d.	2315	233	2548	3825	Sedan, 4d.	2678	216	2894	3890	Custom	3563				Plaza, 6	1490	123	1613	3025	
Riviera	2384	237	2601	3805	Sportsman	2875	231	3106	4115	Sedan, 4d.	3666				Bus. Coupé	1582	130	1712	3089	
Conv. Coupe	2727	264	2981	3950	Convertible					Sport Cpe.	3752				Club Sedan	1622	133	1755	3129	
Ext. Wagon	2899	276	3175	3995					Capri	3910				Suburban, 2d.	1897	155	2052	3261		
Super 50									Sedan, 4d.	4071				Suburban, 4d.	1973	160	2133	3154		
Riviera	2578	253	2831	4075					Convertible	4415				Savoy, 6	1674	137	1811	3109		
Sedan, 4d.	2821	255	2876	4140										Club Sedan	1714	140	1854	3154		
Conv. Coupe	2945	280	3225	4280										Sedan, 4d.	1774					
Roadmaster 70														Club Sedan	1766	144	1910	3129		
Sedan, 4d.	3047	302	3349	4300										Sedan, 4d.	1806	147	1953	3159		
Riviera	3144	309	3453	4270										Sport Coupe	1931	157	2088	3149		
Conv. Coupe	3234	318	3552	4415										Suburban, 4d.	2125	172	2297	3330		
														Plaza, V8	1678	138	1816	3202		
CADILLAC														Club Sedan	1718	141	1859	3246		
Series 62														Sedan, 4d.	162	162	2155	3389		
Coupe	3569	313	3882	4358										Suburban, 4d.	2069	168	2237	3408		
Sedan	3658	319	3977	4370										Savoy, V8	1770	145	1915	3224		
Coupe de Ville	3964	341	4305	4427										Club Sedan	1810	148	1958	3265		
Eldorado	4097	351	4448	4627										Sedan, 4d.	1774					
Series 60	5814	472	6286	4809										Sport Coupe	1774					
Sedan	4342	398	4738	4540										Sta. Wagon	1993					
Series 75	5695	492	6187	5015										Monterey	2069					
Fiftwd. Sedan	5695	507	6402											Hard Top	2400					
Fiftwd. Imper.														Sedan, 4d.	2464					
														Sport Coupe	2444					
														Montclair	2631					
														Hard Top	2711					
														Sun Valley	2711					
														Convertible	2712					
CHEVROLET															NASH					
One-Fifty, 6 cyl.															Statesman	2025				
Util. Sedan	1450	143	1593	3040										Super	190					
Sedan, 2d.	1535	150	1685	3070										Sedan, 4d.	2115					
Sedan, 4d.	1575	153	1728	3115										Custom	3134					
Sta. Wagon, 2d.	1855	175	2030	3305										Sedan, 4d.	2218					
Two-Ten, 6 cyl.														Custom	3450					
Sedan, 2d.	1619	158	1775	3085										Sedan, 4d.	2277					
Sedan, 4d.	1660	159	1819	3125										Sedan, 4d.	2341					
Club Coupe	1675	160	1835	3100										Sedan, 4d.	2400					
Sta. Wagon, 2d.	1900	179	2079	3235										Sedan, 4d.	2464					
Sta. Wagon, 4d.	1945	182	2127	3360										Sedan, 4d.	2444					
Bel Air, 6 cyl.														Sedan, 4d.	2484					
Sedan, 2d.	1724	164	1888	3110										Sedan, 4d.	2500					
Sedan, 4d.	1765	167	1932	3140										Sedan, 4d.	2531					
Sport Coupe	1890	177	2067	3130										Sedan, 4d.	2551					
Conv. Coupe	2018	188	2206	3280										Sedan, 4d.	2571					
Sta. Wagon, 4d.	2070	192	2262	3380										Sedan, 4d.	2600					
One-Fifty, 8 cyl.														Sedan, 4d.	2621					
Util. Sedan	1542	150	1692	3000										Sedan, 4d.	2641					
Sedan, 2d.	1627	157	1784	3030										Sedan, 4d.	2661					
Sedan, 4d.	1667	160	1827	3075										Sedan, 4d.	2681					
Sta. Wagon, 2d.	1947	182	2129	3265										Sedan, 4d.	2701					
Two-Ten, 8 cyl.														Sedan, 4d.	2721					
Sedan, 2d.	1711	163	1874	3045										Sedan, 4d.	2741					
Sedan, 4d.	1752	166	1918	3085										Sedan, 4d.	2761					
Club Coupe	1767	167	1934	3090										Sedan, 4d.	2781					
Sta. Wagon, 2d.	1992	188	2178	3285										Sedan, 4d.	2801					
Sta. Wagon, 4d.	2037	189	2226	3320										Sedan, 4d.	2821					
Bel Air, 8 cyl.														Sedan, 4d.	2841					
Sedan, 2d.	1816	171	1987	3070										Sedan, 4d.	2861					
Sedan, 4d.	1857	174	2031	3100										Sedan, 4d.	2881					
Sport Coupe	1982	184	2166	3090										Sedan, 4d.	2901					
Conv. Coupe	2110	195	2305	3240										Sedan, 4d.	2921					
Sta. Wagon, 4d.	2162	199	2361	3340										Sedan, 4d.	2941					
Corvette														Sedan, 4d.	2961					
Convertible														Sedan, 4d.	2705					
														Sedan, 4d.	2725					
														Sedan, 4d.	2745					
														Sedan, 4d.	2765					
														Sedan, 4d.	2785					
														Sedan, 4d.	2805					
														Sedan, 4d.	2825					
														Sedan, 4d.	2845					
														Sedan, 4d.	2865					
														Sedan, 4d.	2885					
														Sedan, 4d.	2905					
														Sedan, 4d.	2925					
														Sedan, 4d.	2945					
														Sedan, 4d.	2965					
														Sedan, 4d.	2985					
														Sedan, 4d.	3005					
														Sedan, 4d.	3025					
														Sedan, 4d.	3045					
														Sedan, 4d.	3065					
														Sedan, 4d.	3085					
														Sedan, 4d.	3105					
														Sedan, 4d.	3125					
														Sedan, 4d.	3145					
														Sedan, 4d.	3165					
														Sedan, 4d.	3185					
														Sedan, 4d.	3205					
														Sedan, 4d.	3225					
														Sedan, 4d.	3245					
														Sedan, 4d.	3265					

† Prices do not include delivery and handling charges.

NA—Not available.

*** E.O.B. coastal port of entry**

Current Engine and Tune-up Specifications

MAKE AND MODEL	No. of Cylinders Bore and Stroke	TUNE-UP DATA										IGNITION	STEERING			
		ENGINE		VALVES		TIMING		Timing		Caster (Deg.)				King Pin Inclination at Garter (Degrees)		
PILOT Displacement (cu. in., H.P.)	TAXABLE H.P.	RINGS	SEAT ANGLE	OPERATING TAPPET CLEARANCE	EXHAUST	INLET	STELLAIR Diametral Width	OIL. and Width	NO. and Width GASKET PRESSURE	SPARK PLUG AND TYPE	SPARK PLUG GAP	LOCATION	SPARK PLUG CAPACITY (cu. in.)	GROUTING SYSTEM CAPACITY (cu. in.)	CHAMBER (in.)	TOE-IN (in.)
BUICK	V8-40	42.06	284.0	1.88-4800 ^a	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AC-44-5	.004*	FDP	6	3/4 N to 1 1/2 P	0.10	
	V8-50, 60	51.20	322.0	2.35-4600	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AC-44-5	.004*	FDP	6	3/4 N to 1 1/2 P	0.10	
Cadillac	V8-60, 62, 75	63.30	331.0	2.50-4600	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AC-44-5	.004*	FDP	6	3/4 N to 1 1/2 P	0.10	
Chevrolet	V8-1500, 2100, 2400	63.30	340.0	2.55-4600 ^b	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AC-44-5	.004*	FDP	6	3/4 N to 1 1/2 P	0.10	
Chrysler	V8-C68, C88	63.30	340.0	2.50-4200	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AL-IS185	.016	FDP	6	3/4 N to 1 1/2 P	0.10	
De Soto	V8-S22	63.30	340.0	2.50-4600	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AL-IGS175	.016	FDP	6	3/4 N to 1 1/2 P	0.10	
Dodge	V8-D55-1, D55-2	63.30	340.0	2.50-4600	Hyd	Hyd	2-1/2	1-1/2	1-1/2	AL-IS140	.016	FDP	6	3/4 N to 1 1/2 P	0.10	
Ford	V8-40A, 40B	45.00	292.0	1.98-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	CH-870	.016	CP	5	1 1/2 P to 1 1/2 P	0.10	
Hudson	V8	31.54	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	CH-870	.016	CP	5	1 1/2 P to 1 1/2 P	0.10	
Lincoln	V8-73A, 78	34.88	308.0	2.02-200 ^d	ER	ER	2-1/2	1-1/2	1-1/2	CH-H-10	.010H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Mercury	V8-Custom, Monterey	46.50	320.0	2.08-4200	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-G5	.010H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Nash	V8-Montclair	49.60	341.0	2.15-4400	ER	ER	2-1/2	1-1/2	1-1/2	CH-870	.010H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Oldsmobile	V8-5540	45.00	292.0	1.98-4400	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Pickard	V8-Super 88, 98	23.44	195.6	1.90-3800 ^e	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Plymouth	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	CH-N-8-B	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Pontiac	V8-S-44	46.50	320.0	2.08-4200 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Studebaker	V8-16G6	21.60	160.0	1.92-4000 ^f	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
Willys	V8-22B-A	46.50	320.0	2.08-4200 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74a	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
	V8-27, 28	42.05	223.0	1.92-4000 ^c	ER	ER	2-1/2	1-1/2	1-1/2	AL-A-74b	.015H	CDP	6	1 1/2 N to 1 1/2 P	0.10	
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"Display 'em ... and sell more!"



"... customers frequently buy Valve Cap replacements in complete sets when they see our displays."



"... they particularly like the New Valve Core in its new plastic container of 5 as a complete replacement set."



"The #5050A Gauge is popular because it tells them when to come in for air instead of waiting until it's too late."



**so say: Arnold Learch and Ed Wallin
Wallin & Learch Service Station
Darien, Connecticut**

"Customer traffic to our display area is a natural when the displays are neat, functional—and eye-catching. And we've found Schrader Products—#5050A Passenger Tire Gauges, #880MB Tire Valve Caps—and the new, improved #4000MB Tire Valve Cores are packaged to sell. What's more—with our program of Schrader Certified Air Service, we've built increasing customer demand, not only for our Schrader line, but all the products we carry. That's why we display 'em—and sell more!"

You, too, can gain from increased TBA sales through the easy-to-follow plus business program Schrader outlines in Manual A-200. Write for your copy today. And now is a good time to look over your shop and see what Schrader quality products you need—for sale to customers, or your own use. Your Schrader Supplier is ready to fill your needs.

OTHER SCHRADER CERTIFIED AIR SERVICE PRODUCTS



A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
BROOKLYN 38, N. Y.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

8252

Schrader
REG. U. S. PAT. OFF.

NADA Action Program Continued from Page 41

dealers absorb the brunt of today's competitive selling.

So, when we consider this situation we must remember that both of us—the manufacturer and the dealer—have mutual responsibilities. It's a two-way street. We want the manufacturers to make money because that is in keeping with our American free enterprise

system, but they must accept a responsibility in this direction, too, as they are completely dependent on a healthy, profitable retailing organization.

I think our manufacturing friends are learning, by degrees.

As a group, and as individuals, it's up to us to find reasons for our difficulties, and then do something

about them. Your association has been doing just that.

However, before we consider what this program has been, and must continue to be, let us consider one more important phase of our particular business. We are engaged in a one-product business. Unlike the grocer, the department store executive, the hardware merchant, and other retailers, we are, generally speaking, completely dependent upon one manufacturer with one product for our source of supply. It follows that we are dependent upon his judgment as to styling, engineering, sales programs and merchandising. If, through errors of judgment, or otherwise, he makes a mistake, then we go down with him.

In this particular phase we have little or no control over the manufacturer. We are unable to select from our line of merchandise the so-called hot products of the year, but must accept the one product available to us and do the best job possible with it. Thus, our industry is different.

And because our industry is different it's more important than ever that we have a strong national association.

Our national association has many responsibilities. It has many services which make membership in it a real investment.

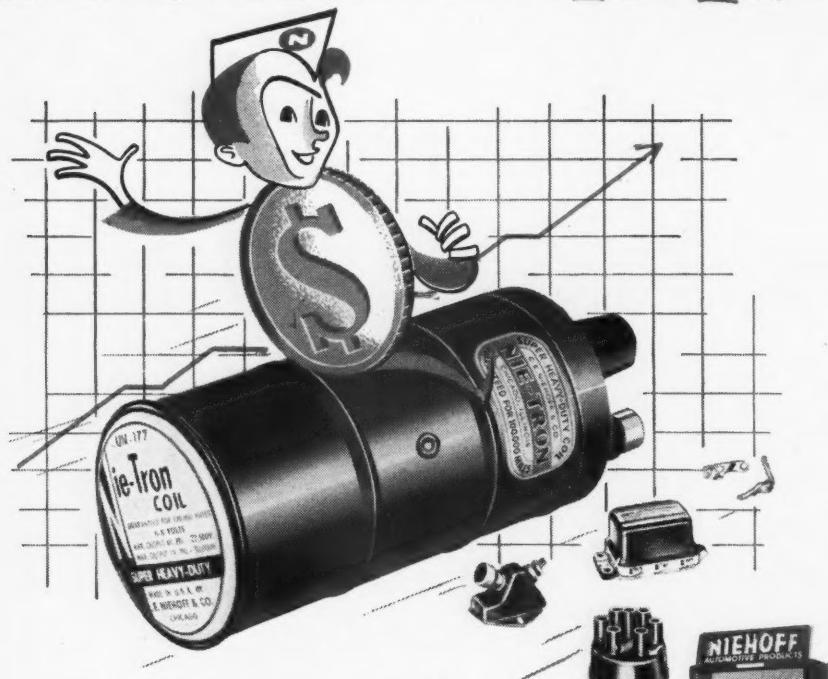
As your president I have felt very keenly the necessity of keeping this association strong. I feel better about the National Automobile Dealers Association than I've felt for a long time. We have a fine staff in Washington. . . . Without exception these have been outstanding men in their fields and during the coming year when these men assume an even more important part in our NADA program you will see that your interests have been protected by providing a staff of which you and I can be proud.

Our staff, backed and counselled by fine committees composed of dealers like you and me, recognize that action is stronger than words. They—both the staff and committees—are men of accomplishment and purpose. We dealers owe much both to the committees, the members of which serve without remuneration and to our staff which

(Continued on page 84)

Get Aboard These NIEHOFF

PROFIT MAKERS



... says **Danny Dollar**

Sail through the year making more money installing Niehoff Ignition Parts. They're precision engineered to meet the exacting demands of your work. Complete line to fit all makes and models of cars, trucks, busses and tractors. Streamlined, instant reference catalog answers service questions at a glance. Ask your jobber.

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positive performance

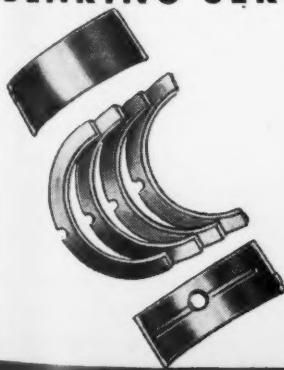


with the rings you know!

Sure you know CHROME-CONTROL LEAK-PROOF Piston Rings. You know they hug that cylinder wall, keep the oil down and power up. You know they seat quick and do the job right and you also know they give positive performance. You know that because you've heard about them for more than 45 years.

McQuay-Norris Manufacturing Company, St. Louis 10, Mo.

McQUAY-NORRIS BEARING SERVICE



CHROME-CONTROL LEAK-PROOF PISTON RINGS WILL
OUT-PERFORM ANY OTHER SET IN THE "HARD-TO-
HOLD" JOBS REGARDLESS OF KIND, DESIGN OR PRICE.

NADA Action Program Continued from Page 82

knows no limitation to work or sacrifice.

What is NADA's action program for 1955? Where do we serve you, the members of this great association?

I think there are five major fields.

First, our relations with the Congress of the United States and the various government agencies in

Washington, D. C.

Second, our relations with our manufacturers.

Third, our relations with each other as businessmen with common goals in the midst of great, intense competition.

Fourth, in our relations with the public.

Fifth, I think NADA has a re-

sponsibility of bringing to us as many management aids as possible. Too long the welfare of the dealership and the people who are employed therein has been forgotten. Management that forgets dealer and dealership and remembers only product selling is no management at all . . .

Underlying every word spoken from this platform and during this national convention has been the association's dedicated principle that we want to keep the present distribution system of automobiles and trucks as it is presently constituted.

Today, this method of distribution is being challenged.

As I have travelled thousands of miles as your president and talked with many dealers I have been appalled by the number of outstanding dealers who are considering taking steps which will lead eventually to the complete abolishment of the automobile dealer franchise.

Why? In many instances the public has shown a preference to do business with other than authorized dealers when they purchase a new car.

Members of Congress asked us why we thought our distribution system was in the public interest.

I am reliably informed that the auto auction business—yes, they have a national association too—will exceed two billions of dollars in the year, 1954.

Bootlegging is of importance to all of us because it is the threat which can mean the end of automobile and truck retailing as you and I know it.

Bootlegging has become a business of national distribution of new cars. In many cases bootlegged cars are ordered before production ever begins. So we cannot say it is now caused by over-buying or over-production. No, bootlegging is a result . . . a result of authorized dealers breaking the rules of the competitive game. Bootlegging is a business, and, a big business, those who sell bootlegged cars to consumers operate without the responsibilities, liabilities, plant investments and long-range public protection that is the cornerstone of our business as you and I know it. We operate a business founded

(Continued on page 86)

let's make money

AUTHORIZED

COLUMBUS
SHOCK ABSORBER

DEALER

The quickest, easiest and most effective way for you to make money in the rapidly expanding shock absorber replacement market is by being an AUTHORIZED COLUMBUS SHOCK ABSORBER DEALER!

Get in on this hard-hitting, profit-pulling, sales-scoring opportunity.

See your COLUMBUS JOBBER TODAY!

This attractive 5-color, 12½" x 19" permanent metal sign is yours FREE (along with many other sales producing tools) when you sign up as an AUTHORIZED DEALER!

HECKETHORN
MANUFACTURING &
SUPPLY CO.
Littleton, Colorado

**FOR THOUSANDS OF DEALERS
this Trico Cabinet**

Sells
blades
faster!



4 BONUS ITEMS WITH EACH D-105 VIS-U-LID KIT



NEW! The VIS-U-LID
which keeps stocks clean
and adds a Solvent display

"Save lives in '55" is focusing more attention than ever on windshield wiper blades.

And this eye-catching Trico Cabinet with its new Vis-u-lid is stepping up sales of arms, blades and solvent for additional thousands of dealers month by month.

Put a Trico Stock Organizer Cabinet to work for you. Right now, with the big season just ahead, your Trico wholesaler has a special introductory offer for dealers who have not yet installed one of these sales-makers.

← If you already have a Trico D-102 Cabinet, take advantage of the D-105 Vis-u-lid Kit bonus "special" which Trico Wholesalers are offering.



NEW ELECTRIC TRICO DEALER SIGN . . .

for window or wall display. Big 15-1/2" diameter, brilliant illumination; ideal night light. Cost? Your Trico jobber has a surprise for you. Ask him.



Windshield Equipment

TRICO PRODUCTS CORPORATION BUFFALO 3, N.Y.

NADA Action Program Continued from Page 84

on and dedicated to the public interest.

We are determined to rid this industry of bootlegging. Our action program for 1955 has been given you. I believe you approve of it and will lend every assistance possible to make it the success it must be if we are to remain the merchants we all want to be.

As our program has unfolded today I'm sure that you recognized that NADA must always keep the public interest paramount in its endeavors. You know of our work on phantom freight and of the action taken by all manufacturers toward the elimination of this charge. It had little effect on some of you, but I can assure you that your fellow dealers in distant areas have been greatly benefited by this action and that most definitely here again this action is in the public interest.

When we sought our anti-bootlegging bill in the last session of Congress and when we supported bills to eliminate phantom freight we asked ourselves three important questions:

First, is this legislation good for our country? Second, is it good for our customers, the people who drive our vehicles? Third, is it good for us, the automotive transportation merchants of this country?

Only when we can answer these questions in the affirmative can we be successful in our efforts, and frankly, I believe, too, that only then are we deserving of success.

I have learned during the last year, that literally hundreds of people, our customers who have bought our cars, don't like to deal with us; so it behooves us now to prove to the public we deserve their business. We must prove to them that our competition of forty years gave value and that it served them well and that it is in their interest that this system be preserved.

If we are to preserve this system we all love and know is right and in the public interest, I think it's necessary for us to adopt a code of good business ethics, a code that you and I will be proud of. I'm sure that you, just as I have, have a code of ethics . . . a code of honor under which you operate your busi-

ness. Yes, you have built your business on your ideas and ideals. We must reflect these ideals as a united industry, on a national scale. Our members must believe in and abide by a high standard, by a code of ethics which will revive morality in the selling and merchandising of new automobiles and trucks.

As I travel across the country, I

am constantly proud of the members of NADA. They are, in the vast majority, fine, upright citizens of their respective communities. This must continue to be the case. We must ask our manufacturers to exercise due diligence, to be most careful, in their selection of any new dealers to enter this industry.

Again and again NADA is asked, what are you doing in dealer-factory relations?

Basically, I believe that two, and only two problems stand out today

no break-in period • greater

with new **WORLD BESTOS**
Prescribed Friction Truck brake
lining sets for light and
medium trucks

new P.F.T. sets give Triple Value

1 NO BREAK-IN PERIOD

Exclusive new World Bestos formula makes brake lining seat faster. You get safe, quiet stopping power right from the start! Eliminates the dangerous and costly "break-in" period. Cuts down on trouble and adjustments that tie up equipment and eat into profits.

2 GREATER STOPPING POWER

Five different frictions are used in various combinations in the new PFT sets. These frictions are engineered to give greatest stopping power for each specific type of truck and its braking system. New PFT sets operate equally well on conventional, hydraulic or vacuum booster brakes.

3 LONGER LIFE

Only the finest grade of friction materials goes into these rigid, Dry-Mix segments . . . assuring exceptionally long wear, even under terrific multi-stop punishment! The ideal lining for hard-driving light and medium truck fleets that must have dependable brake service.

New PFT Sets are available for riveting or bonding in 4-piece, single axle sets for all light and medium trucks requiring linings up to and including $\frac{3}{8}$ " thickness. For price list and complete details see your World Bestos distributor or write direct to World Bestos, New Castle, Indiana.

WORLD

as really important in our factory-dealer relations. When these problems are solved I'm sure that major progress will have been made.

Right now, let me say that after some twenty-five years of conversation on these subjects, no miracles are going to occur overnight, but definite progress has been and will be made toward a more equitable dealer agreement.

I think our first major problem is that provision in our selling agreements with the manufacturers

which allows cancellation without cause.

The time must come, and soon, when we will secure an agreement which calls for cancellation only when there is cause. This is as it should be. It is right. It will come.

When it does, you and I, as businessmen, must accept the obligations that go with such a contract. There must be obligations on both sides, and I think that today we are ready to assume our share of these just obligations.

Our second problem of major importance is, I believe, the one-year dealer agreement.

The one-year dealer agreement is the most unreasonable document ever presented to any businessman for his signature.

It has no place in our free enterprise system.

It must, and I assure you, will go.

It isn't reasonable to ask someone to invest an average of over \$100,000 . . . and this is an average only . . . in a business, to enter into leases and other commitments, and then say, in effect, now you can sell our products for one year.

I'm sure you subscribe to the principle that NADA should have action and less words. In our dealer-factory relations program, we are pursuing the solutions of our problems on the basis of a conference table approach as businessmen of equal stature on a business-like foundation.

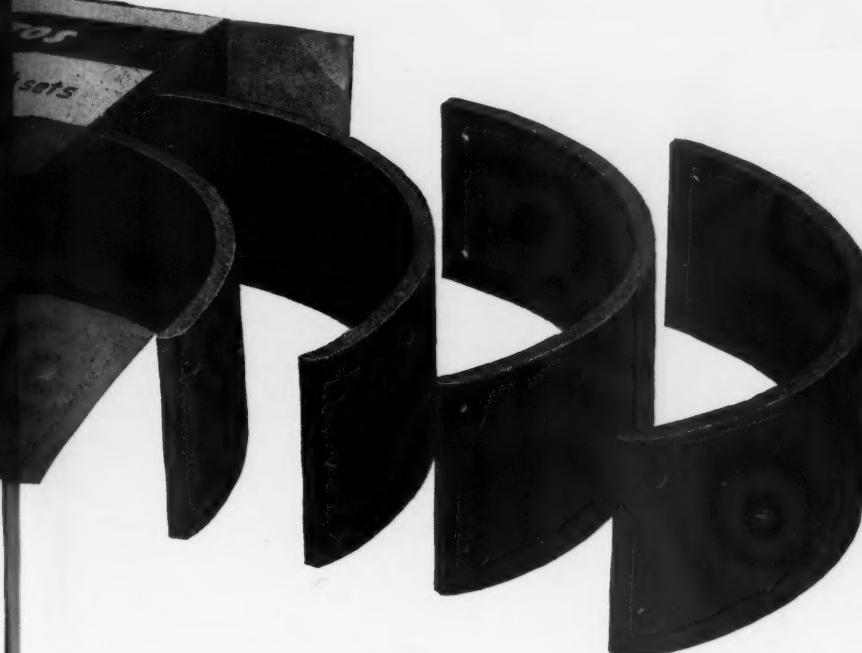
I hope that NADA will continue to pursue our problems around the conference table on a businesslike basis, for better agreements, as well as for solutions to problems which beset us at this time. But, if it finally becomes necessary to secure legislation, we must make sure that it is well considered, long studied, and fair to all concerned, just as has been done in the case of our anti-bootlegging legislative program.

You have heard much talk of government investigation of our industry. NADA has not sought an investigation, but should it be pursued, we will of course cooperate to the fullest extent with the governmental agency involved.

We heard a presentation before a Congressional Committee last summer by one individual who asked Congress to limit production in the year of 1955 to four and one-half million units. If you limit production, you must, of course, take it for granted that your sales will be limited, too, and we want no part of such a program.

We must continue to fight to run our own business as sound, aggressive businessmen. We must remain free, independent people and NADA must represent sound, aggressive, hard-hitting, honest businessmen.

stopping power • longer life



THE 5 DIFFERENT FRICTIONS
USED IN PFT SETS ARE EXCLUSIVE
DRY-MIX FORMULAS USING ONLY THE FINEST
FRICTION MATERIALS AND ENGINEERED TO GIVE
SUPERIOR BRAKE PERFORMANCE



BESTOS

CASILE, INDIANA

Highlights Continued from Page 39

Although many engines are operating on regular grade fuels today, premium fuels are entering the low-priced and mid-priced range cars, what with the availability of power packages.

Within the next five years he visualizes a narrowing of the range of compression ratio for the gamut of engines, implying a larger consumption of 100-octane fuels. In this connection, it is estimated that by 1960 the USA will be consuming gasoline at the rate of 52-billion gallons a year.

From a design standpoint this advance will be accompanied by improved combustion chambers, more mechanical octanes built into the engine, means for reducing deposits, higher bearing loads, and higher stresses. Some of the latter features will mean more problems for the petroleum industry. Incidentally, he expects cooling problems to grow in severity, foresees development of a sealed cooling system, using some synthetic coolant of high stability and high specific heat capacity.

Despite the increased burden on engine lubes, he feels that the trend will be to extremely stable lubricants, capable of giving satisfactory operation with oil change periods of 6000 miles.

Raviolo is much more optimistic about the gas turbine than many. His feeling is that gas turbines will appear to be far down the road then suddenly break out full fledged. He sees the gas turbine in production cars by 1965, expanding through the industry once it has taken hold. It may be operating on gasoline. Lubrication will pose some new problems. Lubes must be capable of operating at temperatures of 500°F, with some surfaces baked to 750°F. Perhaps the biggest problem will be that of lubricating the high speed reduction gearing.

Since the use of hydraulic units is on the increase Raviolo feels that a central hydraulic system of practical form may become essential. Incidentally, he noted that if and when many of these hydraulic features become standard equip-

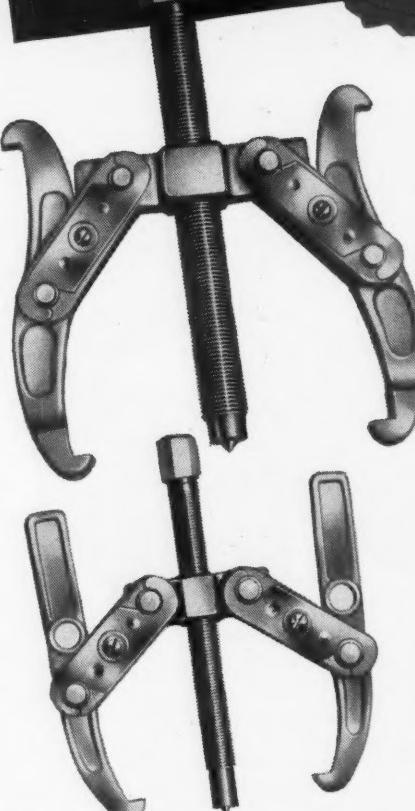
ment on most cars, there will be a demand for special hydraulic oil properties, particularly anti-foaming characteristics.

The main session opened with a summary by E. M. Johnson, The Texas Co., of the recent trends in vehicle design and their effects upon fuels and lubricants. He noted particularly the new mechanical features such as automatic

transmissions, hydraulic valve lifters, power steering and high compression valve-in-head engines, and concluded that the cooperative teamwork of vehicle producers and the petroleum industry has gone far to keep pace with design progress.

The real fireworks resulted from a presentation of the vehicle manufacturers' view of current fuels and lubricants by a team of five experts speaking individually for General Motors Corp., American

Herbrand INTRODUCES COMPLETE



First Major Puller Improvement In years

Now—from Herbrand—you can secure advanced design Pullers to answer virtually every automotive requirement. Only 8 parts instead of 12 or 16. They assure big savings in time and effort on all jobs requiring removal of gears, bearings, bushings, pulleys, grease retainers, oil seals, hubs, steering wheels, balancers, etc. All models are adjustable to wide range of applications—easily adaptable to annual changes in car designs.

No. 830 6" REVERSIBLE JAW PULLER
Here is a quick reversible puller for all types of automotive work. Designed for maximum safety and efficiency. As more force is exerted, the tighter the jaws grip. QUICK-LOCK feature enables user to quickly reverse puller jaws. Has a spread from 0" to 6" and a reach of 3½". Mechanics net \$8.10

No. 832 4" STRAIGHT JAW ADJUSTABLE PULLER
This puller is a single end, two jaw puller that is designed for removing generator, magneto gears and bearings as well as pinions, timing gears and other parts that are difficult to remove. Spread—0" to 4". Reach—3½". Mechanics net \$5.30

The Nos. 830 and 832 Pullers are Herbrand's **TOOL-OF-THE-MONTH** selection.

QUICK-LOCK FEATURE
Spring steel locking arm slips instantly into grooves in integral link pin, thereby locking link securely in position. Jaws reversed or readjusted at a quick simple flick of the finger. No bolts, nuts, or pins to lose or misplace.

Motors, Studebaker - Packard, Chrysler, and Ford. Later some of the more controversial subjects were aired by a team from the oil industry—representatives of Standard Oil of Indiana, Richfield, Pure Oil, Shell, and Socony-Vacuum.

This interchange highlighted some interesting items. Among the most important were those dealing with engine lube specifications, rear axle lubes, automatic transmissions fluids, and chassis lubes. Out of it came some startling

revelations. For example, several makes of cars have eliminated the differential drain plug, recommend using rear axle lube without change, except for make-up, for indefinite periods. Others do not recommend replacing rear axle lubes. Moreover, vehicle manufacturers acted in accord in shying clear of multi-purpose lubes for differentials, preferring the initial factory charge of active EP, some using active sulfur, others lead-soap formulations. It was con-

ceded that after this initial charge had done its work of break-in, a multi-purpose material found in the field might be satisfactory.

J. M. Campbell of GM cited the requirements for engine lubes and mentioned among other characteristics those of high viscosity index, high film strength, resistance to oxidation, low carbon deposition rate. GM recommends using the initial charge of rear axle lube without change periods and recommends the Type A automatic transmission lube without change. He also noted that the Allison Division is developing a proposed specification for Type C lube for heavy duty automatic transmission, probably a mill type oil or turbine oil that does not require high specification quality.

C. E. Burke, American Motors, said that premium oils appear to be imperative for proper hydraulic valve lifter operation. J. M. Clark, Studebaker - Packard, mentioned that his organization was not recommending use of the new multiple-viscosity or multi-grade engine lubes. C. M. Heinen, Chrysler Corp., also voiced a preference for single viscosity rating of engine lubes. However, he emphasized that Chrysler does not rule out the use of multi-vis lubes. Chrysler's position is that it does not object to multi-vis, provided the grade that is used contains the viscosity range recommended for a given engine and operating condition. Chrysler does rule out any lube that does not carry a specific SAE grade.

Heinen also mentioned that Chrysler insists upon non-additive engine lubes for initial engine break-in.

A. E. Cleveland, Ford Motor Co., reported that his company is testing multi-vis engine lubes at the present time to form the basis for specific recommendations.

Chassis lubes came in for attention, too. Some qualitative tests appear to indicate that chassis lube becomes inactive after a period of a few hundred miles of operation. It seems to follow that perhaps cars should be lubricated more often than once in 1000 miles. This is one of the major features of the Lincoln-Mercury Multi-Lube access-

(Continued on page 90)

LINE OF PULLERS

The only Puller Line with the Exclusive QUICK-LOCK Feature

Remarkable QUICK-LOCK on linkage permits adjustment, reversal, or removal of Puller jaws in seconds. There are a total of only 8 parts instead of customary 12 or 16. Jaws can't slip off work...grip tighter as extra force is exerted. Herbrand Pullers are forged from special alloy steel and cadmium

plated for greater durability and finer appearance. Buttress type threads afford $\frac{1}{2}$ more strength than conventional V type design. From every standpoint, these Herbrand models will set the pace in Puller design for years to come. Write today for full details on complete line.

DISPLAY MERCHANDISER No. DB-18

30" x 30" Merchandiser provides eye-catching display of entire line of Herbrand Pullers. Includes No. 825-C Universal Wheel Hub Puller, No. 830 Six Inch Reversible Jaw Puller, No. 831 Eight Inch Reversible Jaw Puller, No. 832 Four Inch Straight Jaw Adjustable Puller, No. 833 Ten Inch Straight Jaw Adjustable Puller, No. 835 Steering Wheel Puller, No. 861 Timing Gear Puller, No. 862 Harmonic Balancer Puller and Driver, No. 866 Slide Hammer Puller, No. 867 Pilot Bearing Puller, No. 868 Three-Way Medium Duty Puller, No. 869 Cross Arm Puller, and No. 872 Gear and Bearing Splitter.

The Tool Line With Turnover
—Not Leftovers!



Herbrand

VAN-CHROME TOOLS
...the finest money can buy!

Herbrand Tools

Fremont, Ohio

THE BINGHAM-HERBRAND CORPORATION

Highlights Continued from Page 89

sory that takes care of 12 lubrication points. It encourages the owner to lubricate these points at frequent intervals.

Effectiveness of the Multi-Lube device was confirmed by the experience of Standard Oil of Indiana, in a scattered operation of some 60 heavy duty vehicles. This is purely an experimental project since

each of the vehicles requires installation of four to five of the units to cover all lubrication points. It was found desirable to install the equipment because these trucks are out in the field where service facilities are not close at hand. Experience to date has shown that the device is effective and keeps all points well lubricated. On vehicles

operating over the road, the accessory is so arranged as to lubricate once for every brake application. In city driving, they have installed a timing device that causes the accessory to operate once for each six brake applications.

After the vehicle representatives had their say, it was obvious that the oil industry did not like their conclusions. Granting that some of the recommended practices hurt the oil industry and service stations in their pocketbooks, the technologists had some technical arguments as well. They were unanimous in concluding that all lubes deteriorate with use. E-P lubes lose their effectiveness and activity over prolonged periods of use; engine lubes lose effectiveness through depletion of additives; and the same is true of other petroleum products. They felt that even if the needs of the first owner might be satisfied by the initial charge,

DON'T OVERLOOK
®
Aero-Seals!

- Giraffes are up in the air over *everything!* But AERO-SEAL Hose Clamps are recognized by down-to-earth car owners and mechanics alike as the one quality hose clamp that holds tight — even under toughest vibration! Miracle precision worm gear drive won't let an AERO-SEAL shake loose, yet allows easy installation-removal with a screwdriver for continuous usage!
- Car owners appreciate the long life of the corrosion-resistant stainless steel band . . . its even pressure will never pinch or damage hose. Remember, it's not discount but demand that means faster turnover, bigger profits for you. Don't get stuck with imitations! Stick with QUALITY . . . feature genuine AERO-SEAL Hose Clamps! See Your Jobber!

PRECISION WORM DRIVE

AERO-SEAL HOSE CLAMPS

ANOTHER  PRODUCT

BREEZE CORPORATIONS, INC. 700 Liberty Avenue, Union, N.J.



"Next time any helpful neighbor suggests I save money changing oil and greasing the car myself, I'll choke 'im."

they had a responsibility to the second and third and fourth owner as well. They did not believe that the various lubricants would be effective indefinitely.

Another point they made was that new developments were a product of experience and could be paid for only through the sale of a specific item. For example, if the sale of rear axle lubes at service stations were discouraged they doubted whether the industry could undertake fresh research projects

(Continued on page 94)



NATION-WIDE SURVEY OF GM CAR DEALERS SHOWS:

Sales are often "automatic"

when you simply figure in

Safety POWER STEERING

"And of course you want Safety Power

Steering . . ." Those eight little words, said offhand to your prospects when you're in the closing room totalling up the cost of their new car, can help you *double your profits on S.P.S.!* Just add in the new low 1955 price and point out that they'll hardly notice the difference in the monthly payments. In most cases you'll make the extra sale without trouble—particularly if you've already given your prospects (especially the *ladies*) a convincing road demonstration of Safety Power Steering's effortless driving and parking ease. Remember, just a little extra effort daily can add up to a *big difference* in your monthly "take"! Saginaw Steering Gear Division, General Motors Corporation, Saginaw, Michigan.



IT PAYS TO PUSH

**NOW PRICED TOO LOW
TO PASS UP!**

by **Safety
POWER STEERING**
Saginaw



Easy does it-
THE WEAVER WAY

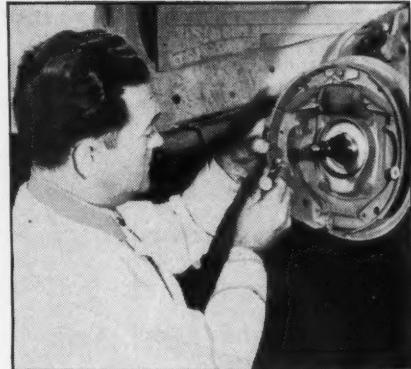
SPEED UP



LUBRICATION SERVICE



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Please send details on

- TWIN POST LIFTS (MA-457)
- SINGLE POST FRAME LIFT (MA-715)

Name _____

Firm Name _____

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WEAVER

SERVICE JOBS 30% TO 100%

WEAVER TWIN POST LIFTS

enable servicemen to see and reach all under-chassis points

Actual time studies on a wide variety of service jobs show that production increases from 30% to 100% when a Twin Post Lift is used instead of previous methods.

A Twin Post quickly raises vehicle to convenient working height . . . gives serviceman complete visual and working access to all under-chassis points. THERE ARE NO RAILS IN THE WAY! Extra high lift permits working in convenient standing position, and rolling tool stand and lube equipment within easy reach. Independent post operation enables

serviceman to position vehicle at best working angle.

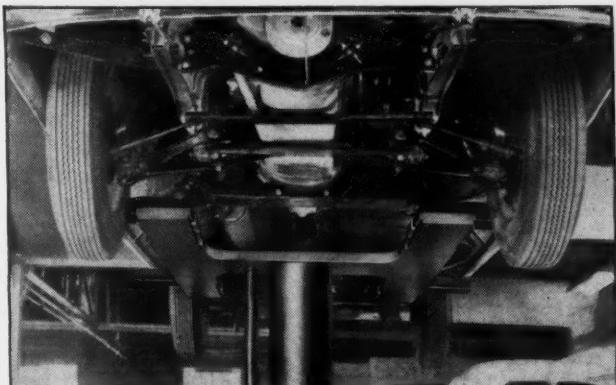
The Weaver Twin Post is the only automotive type lift that can handle all wheel base lengths without loss of lifting capacity. Available air-oil or electrically operated. The Model EC-100, shown, is regularly furnished with wheel base adjustment of 88" minimum and 148" maximum unless otherwise specified.

Consult your Weaver jobber or write us for time study proof of Twin Post superiority job-by-job. Ask for Bulletin MA-457.

SINGLE POST FRAME LIFT

lays flat on floor when not in use

Handles all passenger cars regardless of tread width. Permits direct drive-on positioning . . . will not pinch or bruise tires. Lowers to floor level when not in use. Available air-oil or electrically operated. Furnished complete with adapters, exhaust muffler, non-rotating device, wheel chuck arrangement, and "dead man" controls. Write for Bulletin MA-715.



WEAVER MANUFACTURING COMPANY, SPRINGFIELD, ILL., U.S.A.

SERVICE SHOP EQUIPMENT

Complete Weaver line includes: Twin Post Lifts . . . Single Post Frame Type Lifts . . . Unit Lifts . . . Bumper Lift . . . Car Washers . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . and Air Compressors.

Highlights Continued from Page 90

when the vehicle manufacturer came to the end of the line and demanded a new type of lube for a compact, heavily stressed axle.

R. E. Jeffrey, Shell Oil, made a plea for more frequent engine drain periods to take care of additive depletion. He also drew attention to the fact that the crankcase capacity is trending lower and that

requires more oil changes.

L. Raymond, Socony-Vacuum, mentioned that a new type of additive is on the way for multiple-purpose lubes, asked for cooperation in testing it for acceptance. Touching on the extremely heavy valve train loading in current passenger car engines, he asked for more uniformity of design among

engines of different makes to ease the lubrication problem.

Considerable attention was given to fuels. In general the motor car producers were pleased with the improvement in research octane values of fuels in general distribution this year, particularly since many of the engines were pointed to the higher ratings, as noted by A. E. Cleveland. Other comments touched on the prospect of some added hot starting and vapor lock problems due to higher underhood and carburetor temperatures.

L. J. Grunder urged caution in further increases in engine octane requirements, pointing out that while the slope of the fuel octane curve was quite gradual, the slope representing engine octane requirements has risen sharply during the past few years and will outstrip service station fuels very quickly.

Finally, there was a discussion of the case of the confusing dip-sticks by Carl W. Geori, Quaker State. The title of his paper may have sounded humorous but the subject was not. The gist of the matter is that engine dip-sticks are a source of confusion and irritation to service station workers. There are so many variations in dip-stick sizes and locations, markings and graduations, as well as surface finish that it has become difficult to know when to add a quart of oil. He has requested the API lubrication committee to present a recommendation to the SAE to study the dip-stick problem with the objective of standardizing markings and surface finish.

Finally, it was obvious that although there is sharp cleavage on the matter of lubricants, automotive circles are looking to the petroleum industry for additional research on the many problems covered at the meeting and will welcome improvements in lubes for the engine, axle, and chassis.

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system tight enough to hold water. And only the new PEAK gives FULL-RANGE PROTECTION... protects cooling system metals whether a strong or weak solution is used. This feature makes PEAK the ideal anti-freeze for all regions—North or South, East or West.

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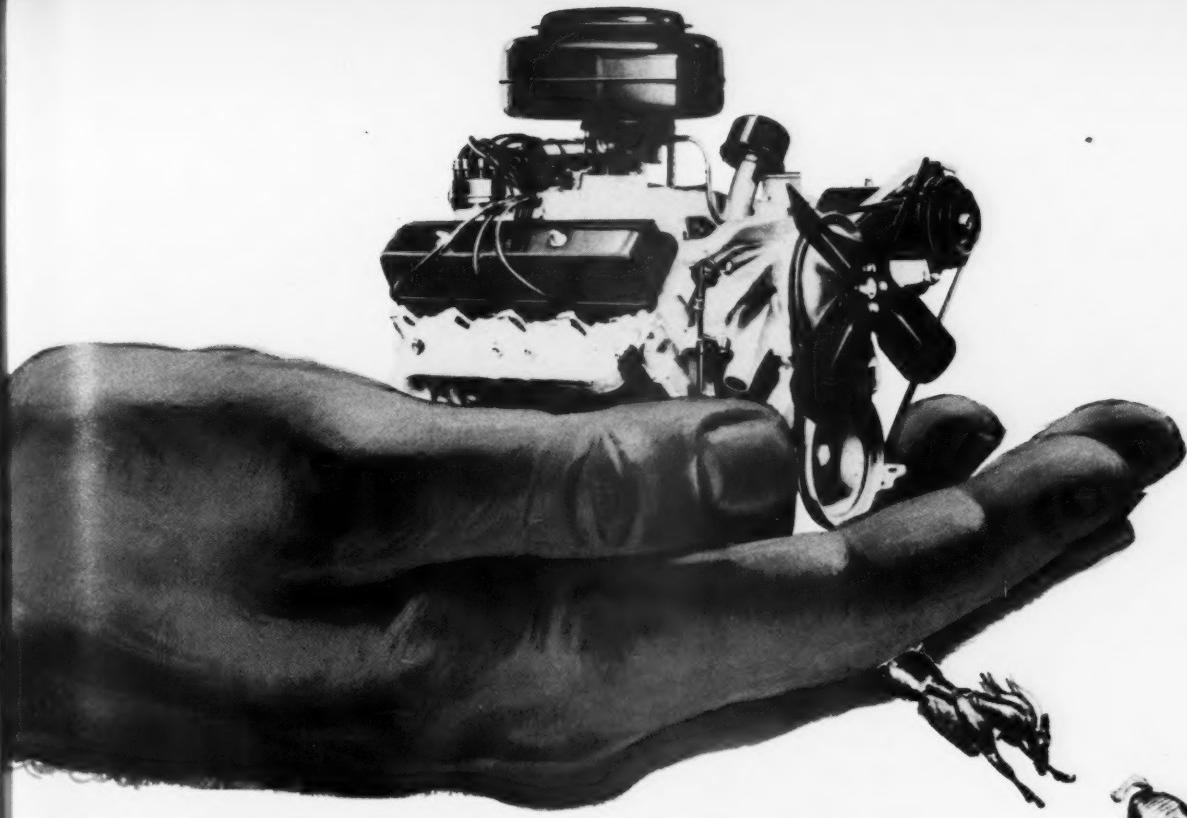
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**All New, All the way through,
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Sales are soaring like a rocket . . . smashing last year's record-highs daily! But it's no surprise to us! We knew we'd have an even greater—even more popular "Rocket 8" for '55! And we got it, too—an all-around-new Oldsmobile, with new "Go-Ahead" style appeal . . . new "Rocket" 202 power . . . new features through and through! *For newness comes naturally to Oldsmobile!* And the public knows it! That's why Oldsmobile business gets bigger and better every year! And that's why, now as always, the best deal is Oldsmobile!

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don't let any of that
new high horsepower
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Here's how you can keep
power "NEW" in every car
you sell and service...

GIVE YOUR CUSTOMERS

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MOTOR OIL

**...the one oil specially formulated for
this "HIGH HORSEPOWER AGE"!**

- *Banishes excessive valve train wear*
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- *Stretches gas and oil mileage*
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**Here's how you can keep
power "NEW" in every car
you sell and service...**

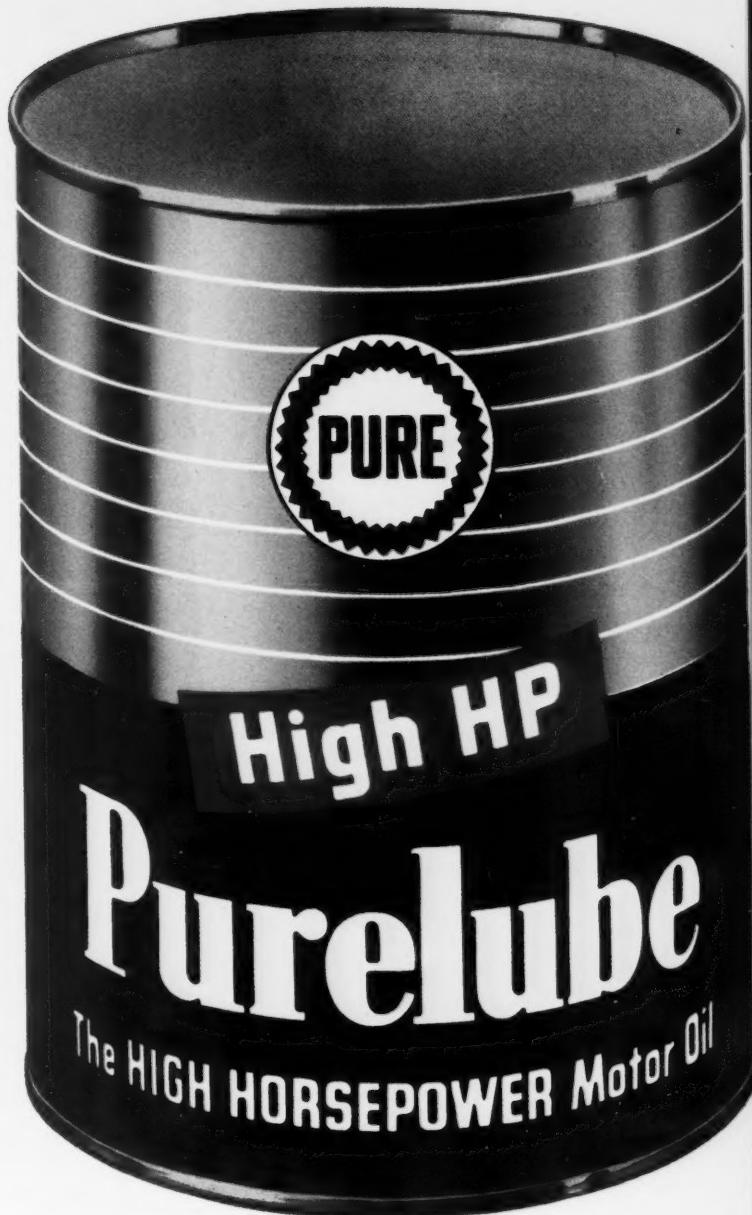
The sure way to beat the special problems created by the new high-compression engines is to use the oil that's specially made for this "High Horsepower Age"—new High HP Purelube.

High HP contains a new, exclusive additive combination that eliminates excessive cam shaft and valve lifter wear . . . keeps hydraulic valve lifters quiet and efficient. And because detergency is greatly increased, low temperature engine cleanliness is improved more than 60%. Complete protection against sludge and rust.

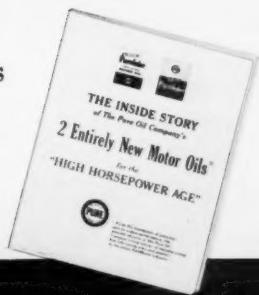
This exclusive combination of additives also cuts combustion chamber and spark plug deposits, fights pre-ignition. Gives maximum spark plug and valve life. Reduces ORI (Octane Requirement Increase).

High HP is a superior multi-grade oil with the widest temperature range protection. It increases gas mileage by reducing friction. It cuts oil consumption by its resistance to heat. Helps get more power out of regular or premium gasoline.

Keep your customers happy . . . keep them coming back to you . . . put High HP Purelube in every car you sell and service. It's the one oil that best meets all the challenges of this "High Horsepower Age."



FREE! Factual booklet on High HP Purelube. Shows how this great oil helps you and your servicemen.



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Gentlemen: Without incurring any obligation, I'd like to get your FREE booklet on the inside story of *High HP Purelube*.

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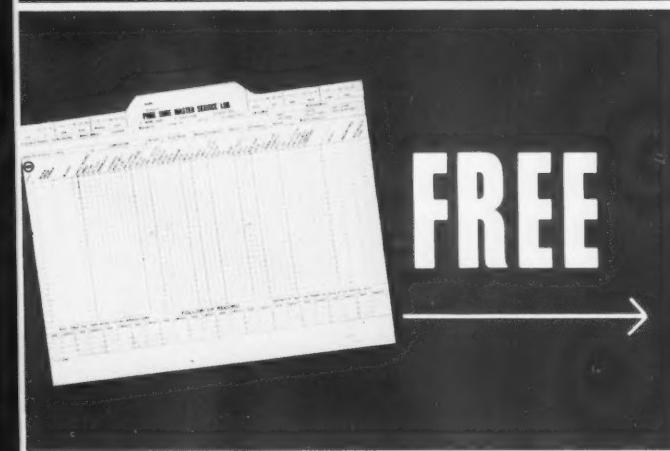
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This copyrighted Service Manual turns your servicemen into "service experts." Shows how to service cars faster, easier. Exclusive "under-hood, under-chassis" lubrication charts show how to lubricate every make, every model . . . always up-to-date. Get it free!

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Your customers get added confidence when you give them this 35,000-mile warranty with their new cars. Helps close sales, too. And it brings 'em back to you again and again for lubrication—right up to trade-in time!

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Another free Pure Oil aid. Complete system for following-up lubrication and service customers. Makes your work easy . . . brings in the customers on a regular basis. A sure way to build service volume.

Be sure with Pure



Torque Converters . . . Continued from Page 45

would be most likely.

Complaint: Slipping clutch effect with car stopped, brakes applied, transmission in gear and throttle open. This may be caused by oil leakage onto clutch from converter. Replace clutch driven disk and thoroughly clean oil from entire clutch assembly. Check converter oil seals for leaks and replace if necessary. If slippage is noted when car is in motion it is probably due to low oil level in reservoir or low oil pressure in converter. Fill converter and reservoir to proper level. Check oil pump pressure by connecting a gage to the plug on the support plate assembly just above the line going to the oil cooler. If pressure is considerably lower than 30 lbs, check pump bushing and teeth, also check the relief valve.

Noises: If a whining noise within transmission, in neutral, is noted it is probably due to a worn oil pump bushing. To correct replace the pump body. If bushing looks OK, check the pump gears for scores and burrs and replace as necessary. If noisy while in gear, with car running, check the pump bushings and gears and if they are found in good condition, replace the converter. If low oil level is noted repeatedly in the reservoir and the oil seals seem to be in good condition, a sticking relief valve could cause the trouble. When the relief valve sticks in the open position it causes the oil to flow from the reservoir, through the pump and relief valve and back again to the reservoir without feeding the converter and oil cooler. Lack of sufficient oil flow in the converter causes high temperatures with subsequent loss of oil through the breather tube. To correct this condition replace the relief valve.

Converter Overheating

If hot oil smell is noted and the water temperature indicator reads abnormally high, check the following:

Stuck relief valve, bent or plugged oil lines, oil pump operation, clogged oil cooler and waterpump.

If the above items are OK the converter is at fault and should be replaced.

After installing a new converter it is sometimes necessary to prime the oil pump. This is done by applying a small amount of air pressure (about 5 lbs) on the reservoir at the breather connection while the engine is running.

Servicing the Torque Converter Support Plate

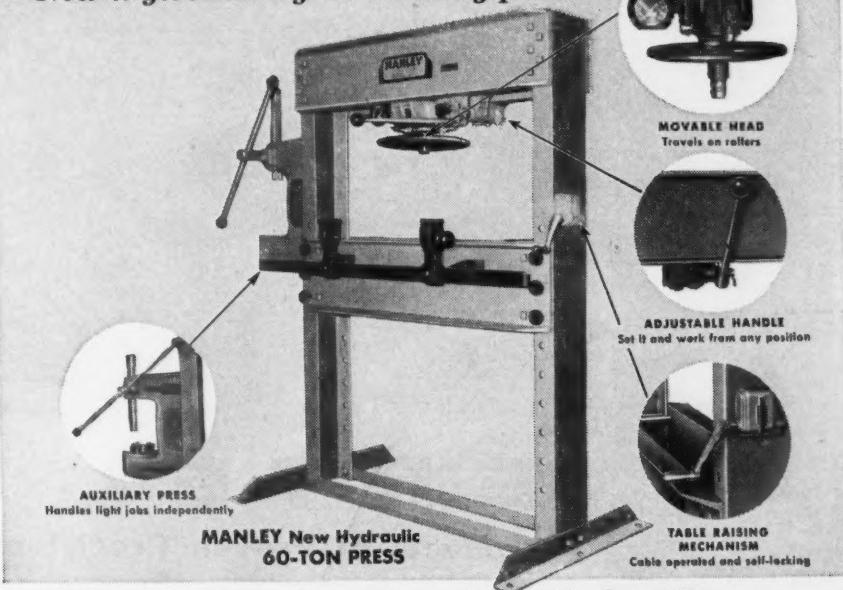
The torque converter itself is a welded assembly and can be serviced only as a unit. The oil pump and parts of the support plate are serviceable. After unit has been removed from the car. Disassemble the unit as follows: Take out the six pump body-to-support plate cap screws. Remove the pump body from support plate by dropping two

(Continued on page 102)



Manley Presses

"Our MANLEY Press
Paid for Itself in 9 Months' Time.
Now it gives us a good monthly profit"



Here's How You Too Can Make Money with a Manley Press

• Hundreds of shop owners are making good money on their MANLEY Presses, like the garage man quoted above. With a MANLEY Press you save the time of a man delivering and picking up the work from somebody else. And . . . you save the profit the other shop has to make. You will bring other work in, too, if you have an efficient, easy-to-use MANLEY Press.

MANLEY Presses are made in 25, 40, 60, and 80-ton capacities for manual or air operation. Features such as bolted construction, open design, self-locking table, positive ram control which can't be overloaded make a MANLEY Press your best buy.



**5 MODELS
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**Manley Division
AMERICAN CHAIN & CABLE**

York, Pa., Chicago, New York, Portland, San Francisco, Bridgeport, Conn.
The Best Equipped Shop Gets the Profitable Business

Torque Converters . . . Continued from Page 101

steel dowels, $1\frac{1}{4}$ inches long by $\frac{1}{4}$ inch thick, into the two tapped holes in the pump body. Screw in two $\frac{3}{8}$ inch-16 cap screws against the dowels and jack pump body out evenly from the support plate. Lift the stator shaft and the transfer plate from the support plate.

Removing turbine shaft bearing and seal from support plate: Re-

move the oil seal ring from the turbine shaft. Take out the small turbine shaft inner snap ring. Place wooden blocks under outer edges of support plate and strike turbine shaft with a soft hammer, to jar the support plate loose from the shaft. Remove the turbine shaft bearing outer snap ring from the outside diam-

eter of bearing. Drive bearing out of the support plate by inserting a driving tool that will drive against the inner race of the bearing from the seal side of the plate. The tool should be of a smaller diameter than the seal at least $1\frac{3}{8}$ inches. Drive the turbine shaft seal out of the support plate with a punch.

Installing Turbine Shaft Bearing and Seal

In support plate: Place new bearing squarely over bore. Then with a flat wooden block covering the entire bearing, drive the new bearing into the support plate as far as possible, then drive it the rest of the way by striking evenly on the outer race. Install large turbine shaft bearing outer snap ring to outside diameter of bearing. Install new seal in opposite side of support plate by driving it with a wooden block until flush with the support plate face. Reinstall the support plate and bearing assembly on the turbine shaft by driving on the in-

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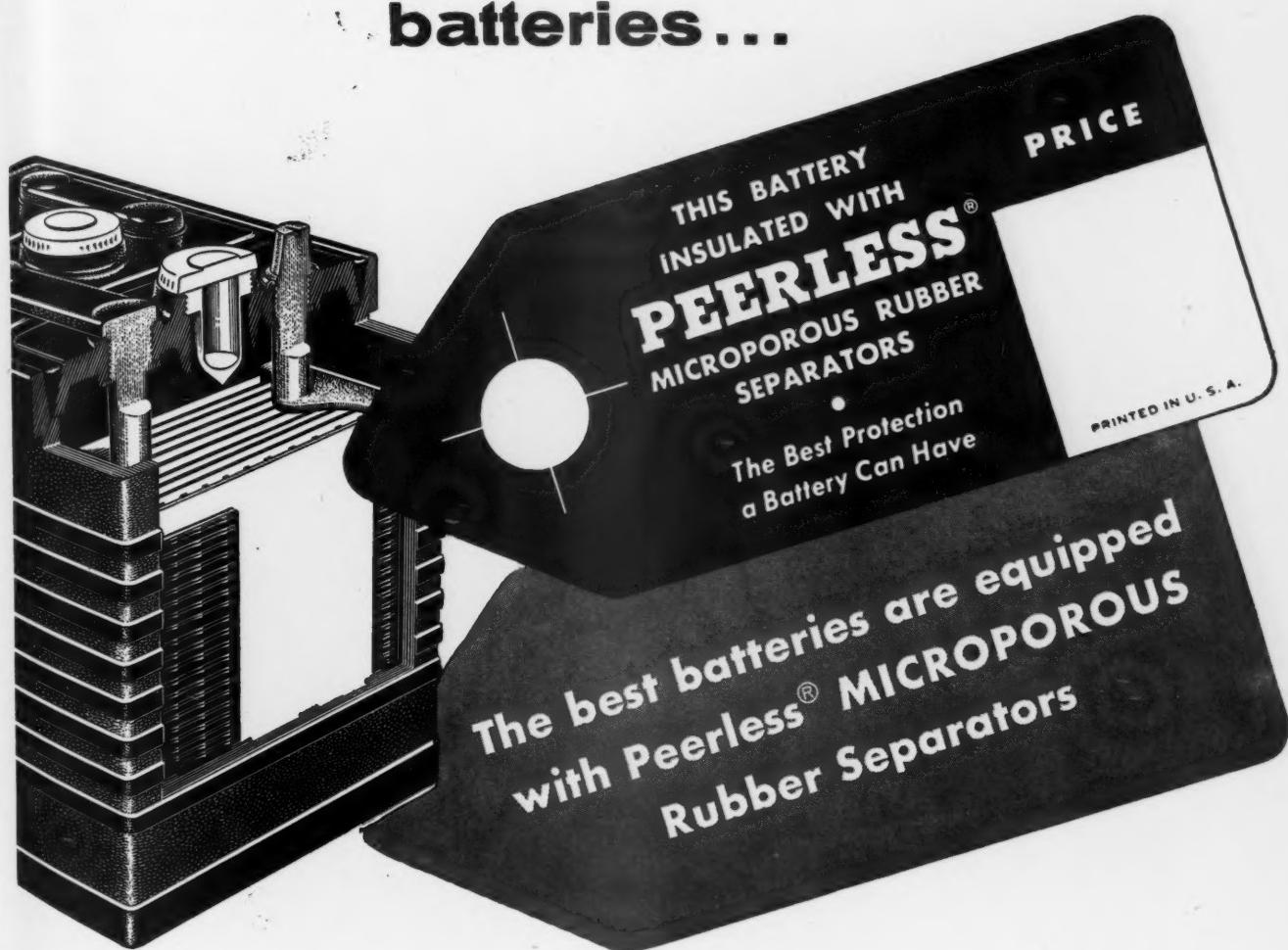


ner race of the bearing with a tubular driver. The driver should be about 8 inches long and $1\frac{1}{2}$ inch diameter. Install small turbine shaft bearing lock ring. Snap ring is available in three thicknesses. Use one that fits the tightest in the slot. Install the turbine shaft oil seal ring and lock it in place.

Assembling the oil pump to converter support plate

Install the stator shaft and flange
(Continued on page 104)

Let this tag help sell your premium line of batteries...



You slip this eye-catching salesman onto the battery post easily and quickly.

- It dresses up the battery.
- Tells the customer instantly that the battery has the best insulation available. It can also be used as a price tag.
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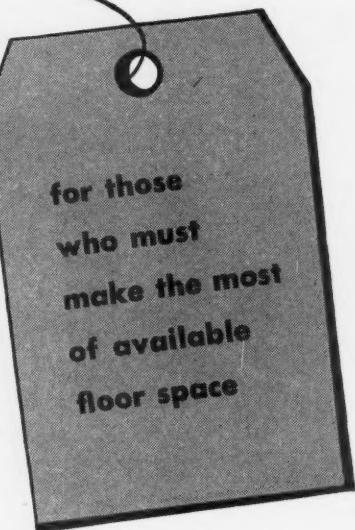
TOMER OF THE ADVERTISEMENTS
OF Peerless Separators HE HAS SEEN
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Send today for your free supply of these tags. They announce, in the quickest, strongest way, that *the batteries you sell are loaded with protection and long life*. And read the U. S. Peerless Separator ad, in the March 5 issue of *The Saturday Evening Post*.



UNITED STATES RUBBER COMPANY
BATTERY SEPARATOR SALES DEPARTMENT • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

WHAT'S NEW in air compressors



Binks NEW vertically mounted air compressors

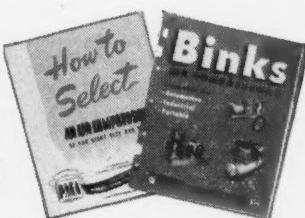
Are you crowded? Do you need more space? Then you will be interested in this new line of Binks vertically mounted air compressors.

These compressors are designed with the same efficiency and stamina as other Binks air compressors...but they take up amazingly little room. Even the biggest unit requires only 4 square feet. You can stand this compressor in a remote corner out of the way and free valuable space for other profitable activities.

You have your choice of several models of two-stage units ranging from 1 to 5 h.p....a model for every need.

Send for these 2 booklets today:

Here are 2 booklets that will help you select the right air compressor for your particular shop. HOW TO SELECT AN AIR COMPRESSOR is packed with information you need to know, no matter what kind of compressor you buy. BINKS CATALOG 810 illustrates and describes the many models that are available and tells the advantages of each. Ask your jobber for free copies today...or write directly to the address below. There is no obligation.



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Torque Converters ..

Continued from page 102

assembly in the support plate, making sure that it slides completely over the oil seal ring on the turbine shaft. Use caution not to damage the seal ring. Also make sure all bolt holes in the stator shaft flange are in proper alignment with the bolt holes in the support plate. Install the oil pump transfer plate over the stator shaft with the large counterbore down and with bolt holes in proper alignment with the holes in the stator shaft flange and the support plate. Coat the oil pump body with chassis lubricant and install the oil pump gear in the body. Then install the pinion in the pump body with the counterbore of the pinion facing the bushing in the pump body.

Using a flat piece of steel and feeler gage. Clearance between the body face and the face of the gears should be .0012 to .0032 inch.

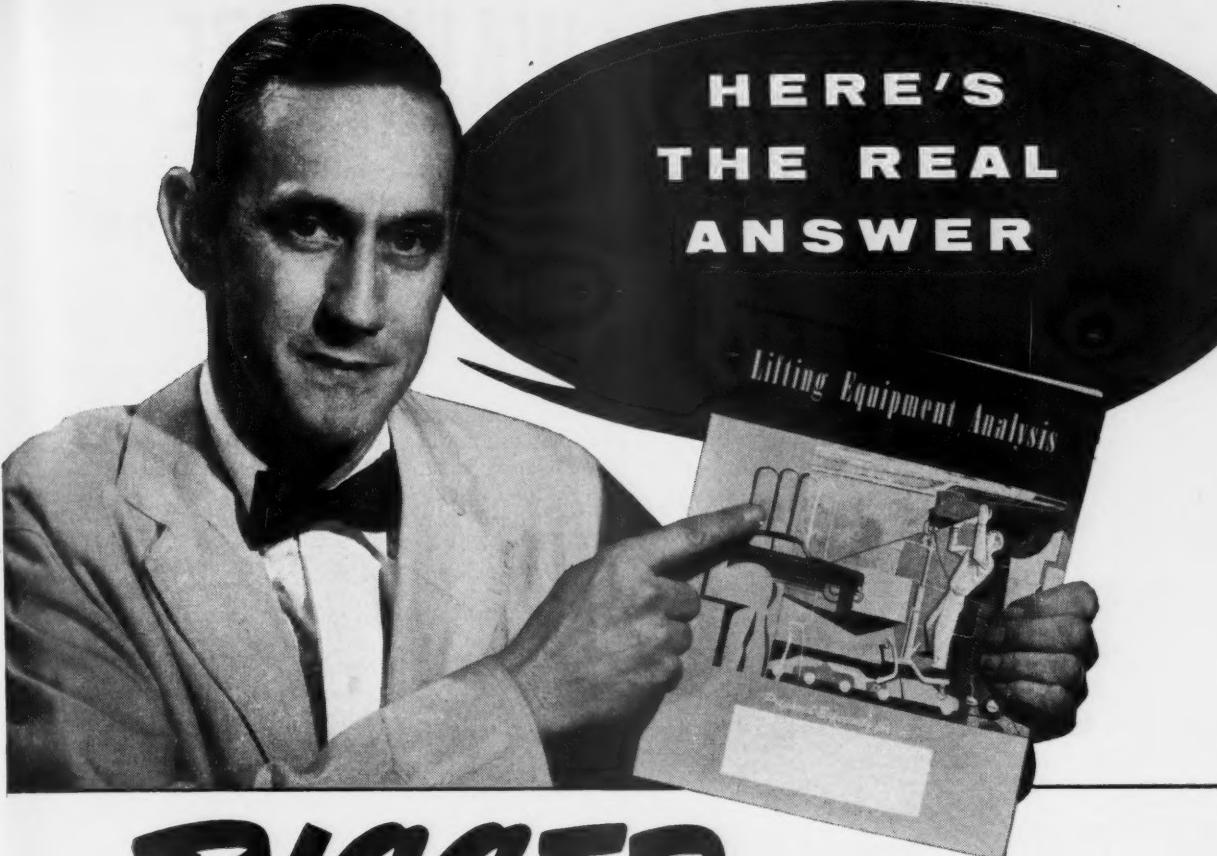
Pack chassis grease between teeth of pump gears so pump will not have to be primed. Coat the seal ring on the pump body and the chamfer on the support plate with chassis lubricant. Then install the pump body on top of the transfer plate in the support plate, alining all the bolt holes. Install the cap screws and washers and tighten them down uniformly.

Top Level Changes At Ford Announced

Henry Ford II, president, recently announced the election of Ernest R. Breech as chairman of the board. Lewis D. Crusoe and D. S. Harder were elected executive vice presidents and Robert S. McNamara and Dwillard J. Davis as vice presidents.

Mr. Crusoe becomes executive vice president in charge of the company's three automotive divisions. Mr. Harder becomes executive vice president in charge of three basic manufacturing groups.

Mr. McNamara, as vice president and general manager of Ford Division, replaces Mr. Crusoe in that position. Mr. Davis succeeds Mr. Harder as vice president-manufacturing, a staff position.



HERE'S
THE REAL
ANSWER

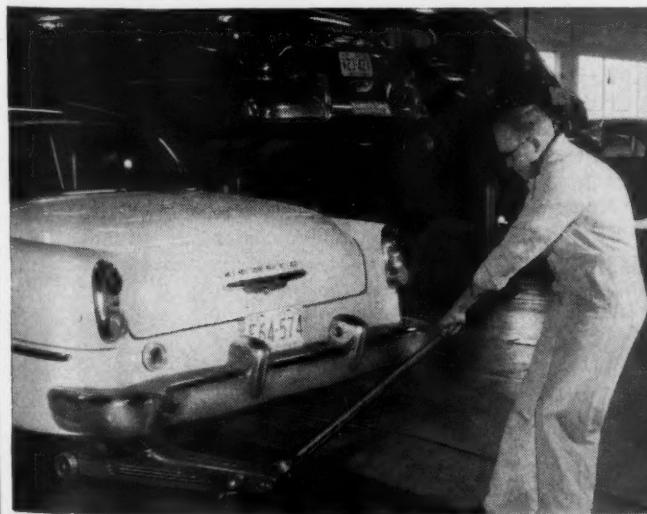
TO **BIGGER** SHOP PROFITS!
ASK FOR YOUR FREE COPY

Do you know how to pick jacks to fit your particular shop jobs? The capacity and range demanded? How many jacks you should have? How to make your present jacks last longer?

This "Lifting Equipment Analysis" booklet has all the answers . . . including a shop analysis chart so you

can make your own jack survey. It's packed with useful facts about jacks—proved in the field and approved by service managers.

See your Walker Jobber or write to Walker Manufacturing Company at Racine, Wisconsin for your copy . . . there's no charge.

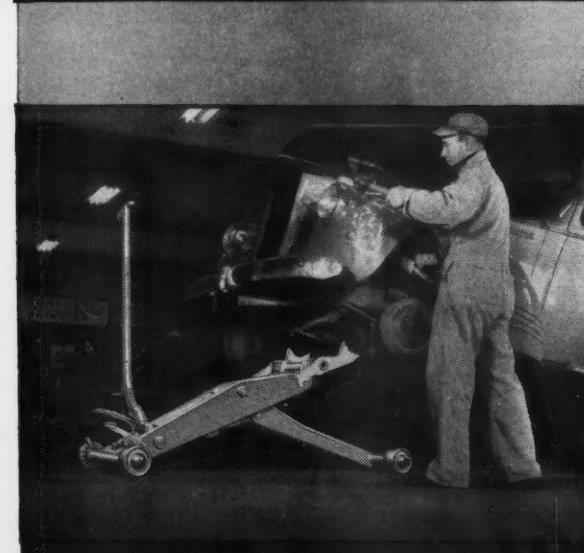
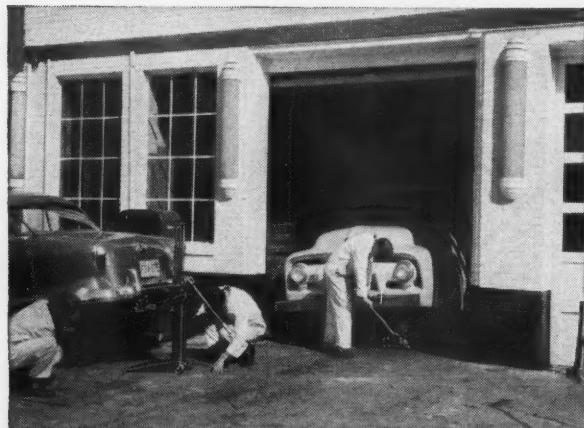


**1 WALKERIZED FLOOR SERVICE
AND INTERSHOP MOVING**

Efficient floor service requires a roller type jack with sufficient handle and chassis length to permit easy placement under front or rear axle . . . sufficient capacity to quickly and easily raise one end of the vehicle . . . power raise and top height must be adequate to provide ample wheel clearance and satisfactory working clearance beneath the car . . . and a sufficiently low starting point to handle cars with low centers of gravity. It should have a swivel lifting cap and rear casters to permit either the jack or the listed car to be moved. Such jacks are the *Walker Greyhounds*, America's finest hydraulic service jacks, available in 2 and 4 ton capacities.

FOR GREATER SHOP EFFICIENCY

WALKERIZE



② WALKERIZED DRIVEWAY SERVICE

Most inspection, or minor adjustment services—tire changing, brake, wheel removal, etc.—require a light, fast jack on wheels for ease and speed of placement. Less capacity is satisfactory because of the lighter load. Starting point must be sufficiently low to provide ample axle clearance and power raise and high point must be adequate to provide satisfactory wheel clearance even on cars with individual wheel suspension and fender skirts. Recommended: A No. 867 *Walker Whippet*; a No. 707 *Utility Lift-A-Car*; or a *Walker "Handy Boy"*—the new No. 99 *Hydraulic One End Bumper Lift*.

③ WALKERIZED ROAD SERVICE

A good road service jack must be (1) compact and portable; (2) have sufficient capacity to handle a wide range of vehicles; (3) have a satisfactory lifting range to offset varying road conditions.

Walkerized road service offers two choices . . . the *Walker Whippet* with its removable handle . . . or the *Walker No. 707 Utility Lift-A-Car* which has an unusually wide lifting range and is an excellent, all-purpose jack for road service. It is also a good idea to carry one or two portable hydraulic jacks in the trouble car for emergency use.

④ WALKERIZED BODY AND FENDER SERVICE

Many service operations specialize in body and fender work . . . brake work . . . undercoating . . . shock absorber service . . . steam cleaning and exhaust system service. For these shops the *Walker Hydraulic One End Lift No. 76* is excellent basic equipment. Portable, easy-to-handle, it takes the place of a lift or a jack in many services. It can be "job-spotted" on the service floor—saving time, space and providing complete stability and safety for the mechanic.

This Hydraulic One End Lift is also valuable for general tightening work . . . installing chains . . . gas tank replacement . . . lubrication . . . differential service and all other types of under car repairs.

WALKER LEADS IN JACKS



FOR GREATER SHOP PROFITS WALKERIZE

5 WALKERIZED AUTOMATIC TRANSMISSION SERVICE

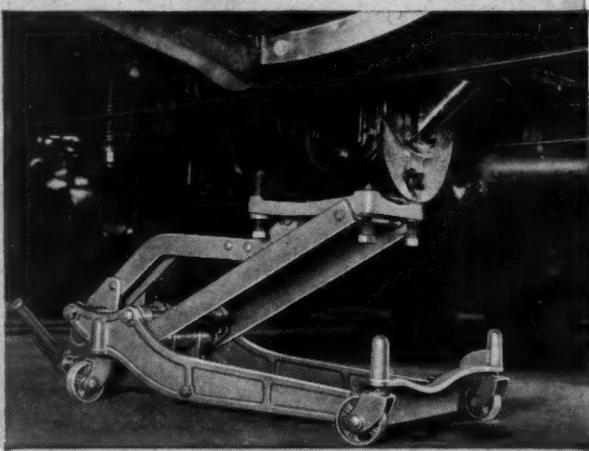
With the constantly increasing number of automatic transmissions, the modern service operation must have an automatic transmission jack for proper removal and replacement. It should be one that can satisfactorily handle all types of automatic transmissions—not specialized to only one make.

The Walker "Uni-Cradle" Pedestal Type No. 48 and the Floor Type No. 44 meet all requirements. With its universal adaptor head and sets of blades, plus the special adaptor for Chevrolet "Powerglide," the Walker "Uni-Cradle" raises, lowers, tilts and axis-rotates the transmission with almost micrometer accuracy. The Walker Hi-Boy No. 700 makes an excellent engine support.



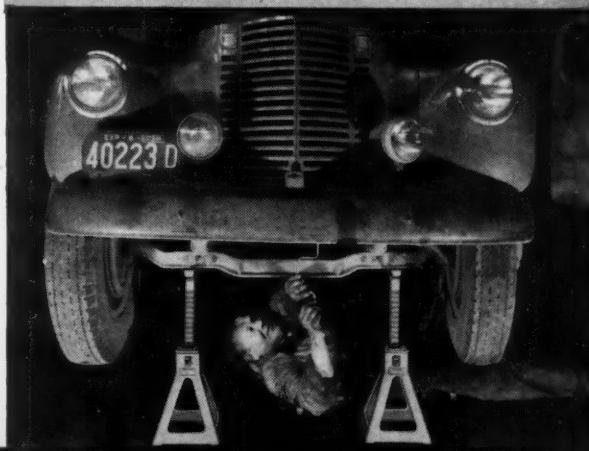
6 WALKERIZED HEAVY DUTY TRANSMISSION SERVICE

For the handling of heavy under-vehicle units on trucks and buses, a special lifting tool was developed—the Walker "Unit-Lift" No. 798. It provides a safe, easy means of removing and replacing transmissions, differentials, front and rear axle units and many other difficult jobs. The large cap is also adaptable to individual "shop-made" holding devices. It saves man hours . . . makes a one-man job out of an otherwise difficult and often dangerous "two-or-three-man" job.



7 WALKERIZED UNDER-CAR MAINTENANCE SERVICE

In the Walkerized shop the mechanic works in complete security beneath a car supported on *Walker Car Supports*. These Supports are designed to provide extreme rigidity and are adjustable to provide maximum working clearance. The use of Car Supports for all work requiring stationary support is not only good shop practice from the standpoint of safety . . . but also releases expensive service jack equipment for other uses and enables the shop to maintain service with minimum investment.



WALKER

MANUFACTURING CO. OF WISCONSIN • RACINE, WISCONSIN

Jacks • Exhaust Silencers • Oil Filters

Pop O'Neill

Continued from Page 51

an efficiency expert. Said clean shops bred good work. Said orderly shop areas contributed toward precision workmanship. Said . . .

"Hell, I think Pop went to sleep while he was cleaning up the attic at home Saturday and had nightmares. Figured I was getting out of something because I'm not

hitched to a dirt-chasin' woman. He's just jealous . . ." Tommy's whine was drowned out by the wham of old casings hitting the bed of the pick-up.

Pop appeared. "I heard you gripin', Tommy. So I'll tell you why we gotta' keep this place respectable. Ever hear of customer appeal? Ever walk out of a diner

when you find the waitress picking a fly out of the soup?"

"No, but I've walked out when I found her down scrubbing the floors instead of tending to business like waiting on people," Tommy snarled.

Pop ignored the irony. "People like to see a clean place. They know then that they're going to get clean work. And good mechanics, by the way, don't go around in coveralls with the legs too long. Why don't you let Mrs. O'Neill cut them things off to fit you and sew them up?"

Tommy laughed. "I'll bring them over some night. But if you think for a minute she can inveigle me into wearing ties . . ."

Pop flushed a little but changed the subject. "Let's talk about shop cleanliness. Do you know, Tommy, that dirt causes probably 90 per cent of the wear in some of these engines? And a lot of it is introduced right in the shop."

"What do you mean by that?" Tommy stopped scraping at the spot on the floor and leaned on his shovel. "How does it get into an engine around the shop?"

"From dirty oil filling cans, dirty parts installed without cleaning, from dust settling on parts left exposed."

"That's a lot of propaganda."

"Why, they say that over 200 tons of dust settle over a square block in New York City every day. That's why parts should always be covered when they are taken out."

"That's a lot of hooey."

Pop said something under his breath and turned to wait on a customer at the filling pumps. Tommy filled a pan with solvent and began to scrub the floor.

Then somebody yelled "Fire!" It was Larry who saw the blaze first. He ran for the extinguisher. The blaze was small, but it was fierce and hungry. Flames already began to shoot up toward the workbench, where a can of gasoline was sitting. Larry ran over and grabbed for it, but in doing so knocked a can of oil off the bench. It fell into the flames and black smoke poured out, completely shutting off the area. Tommy was heading for the phone and the fire department, but Pop

(Continued on page 110)



use only
FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!



Bendix Drive

ECLIPSE MACHINE DIVISION of **Bendix**
ELMIRA, NEW YORK
Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

**23,000 Masters
of Re-carburetion**



CARTER CARBURETER SPECIALISTS

...are ready to help your car
deliver top performance!

More than 23,000 men have successfully completed a thorough, rigorous training course in today's modern carburetion and tune-up. Graduates of Carter Factory Service Schools know how to keep your car running smoothly, economically.

The fuel system is the Power Center of your car.
It can make or break automotive performance.



Masters of Re-Carburetion are easily identified by this sign. Also listed under **CARTER** in your classified directory.

CARTER CARBURETOR CORPORATION
St. Louis 7, Missouri

Division of ACF INDUSTRIES, INCORPORATED

Here's another good reason why
it pays to be a
Carter Master of Re-carburetion

Hard-hitting national ads sell the talents of the men who are graduates of Carter Factory Service Schools.

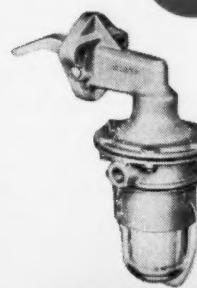
Just look at the advertisement shown here reduced. It is one of a series telling the car-owning readers of America's top magazines it pays to depend on Carter-schooled specialists for fuel system service.

We sell your skill! So, make a point of acquiring that skill through Carter's Personalized Instruction Course. It's conducted by experts--held right in your vicinity--covers carburetor service thoroughly.

More than 23,000 repairmen have used this schooling to become Masters of Re-Carburetion. You can, too. For full details, see your nearby Carter distributor or write direct.

Masters of Re-carburetion Stock and Sell the

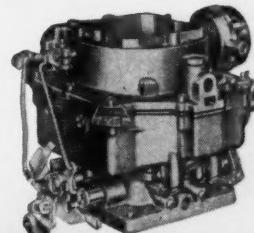
CARTER



CARTER
Fuel Pump
assures dependable
fuel supply



CARTER
Fuel Filter
keeps fuel
clean



CARTER
Carburetor
provides the
right mixture
for top
performance

CARTER CARBURETOR CORPORATION

St. Louis 7, Missouri

Division of ACF INDUSTRIES, INCORPORATED

Pop O'Neill Continued from Page 108

ran back with a pail of sand he kept near the office door.

"What's the matter with that extinguisher, Larry?" he called. "For Pete's sake, man. Don't stand there waiting for a weiner roast? Use it man! Use it!"

"It won't work! Must be out of fluid," Larry threw the extinguisher on the floor and picked up

some blankets from the corner.

"Wait! This sand may do it." Pop scattered the sand over the edges of the flame, confining it to a couple square feet. "Now throw the blanket over it!"

He did, while Tommy came in with a shovel and beat over the blanket, smothering it to an ugly smouldering mess. By this time

the fire department was there, and three firemen came rushing in with extinguishers and a hose.

"It's all over, thank goodness," Pop panted. "You guys made some fast time, though. Boy that was a close one!"

"What happened?" the chief queried. "Not cleaning with gasoline were you?" He turned toward Tommy, who looked at this point like the ant who swallowed the June bug.

Tommy stammered. "No. That's solvent in that can. I was just scraping up the floor with that shovel after I soaked those greasy spots with cleaner. And I didn't see what started it . . ."

Pop picked up the solvent can, smelling it. "High test at that," he muttered disgustedly. "Now where the hell did this come from?"

The chief took the can. "Gasoline in a solvent can! That's a dangerous thing to do, son. My God, it's a wonder somebody didn't get killed. You're just lucky you didn't lose a shop."

"Question is," Pop scowled at Tommy, "How did this gasoline get into a solvent can? Wait a minute. We're not using this brand of solvent any more. Where did you get this?"

"Off the truck. Off the load of junk you brought in this morning."

"And you took it off? Hell, I don't know what that was. I threw it on this morning, expecting you to take it to the junk pile."

"I remember where it came from," Larry spoke up. "I filled this with gasoline last summer for your lawn mower, remember? Tommy brought it out one night after work to get it started."

The chief turned and walked out, and the fireman followed, folding up the hose and resetting their equipment. "Looks like we all ought to take some blame in this miscarriage," Pop said. "But at least we all ought to have a lesson from this fire. And dammit just what I was trying to guard against. I gave you birds all the answers I could find for cleaning up the shop. But I failed to mention one of the most important reasons for tidiness in any business. Fire hazards!"

(Continued on page 112)

Outstanding engineering design and precision manufacturing technique combine to provide finest possible performance, long life, handling ease and operating simplicity. Fully enclosed Diamond chain drive. Enclosed Timken reel bearings with automatic take-up. Patented, positive action, non-wearing clutch. Extra strong, zinc die cast alloy frame. Zinc die cast alloy pinions with hardened steel inserts. Patented "Quick-set" height adjustment with a range of $\frac{1}{2}$ " to $2\frac{1}{4}$ ". Briggs & Stratton 4-cycle engines (rope or recoil starters). Power driven weed topper and reverse belt for self-sharpening - optional equipment.

The Cooper "Cyclo-Mo" Trimmer Type Rotary Power Mower with improved design provides lighter weight, MAXIMUM SAFETY, closer trim and contour cut with NO SCALPING. Adjustable front grass chute eliminates WINDROWING or BUNCHING. Simple height adjustment from $1\frac{1}{2}$ " to $3\frac{1}{2}$ " permits the cutting of high grass or tough weeds. Briggs & Stratton 4-cycle engines (rope or recoil starters). "Cyclo-Mulch" leaf mulchers optional equipment.

NATIONALLY ADVERTISED IN '55

More "Klipper" and "Cyclo-Mo" power mowers were sold in '54 than in any other year in the history of the company. Every year - more and more home owners realize that only Cooper gives them the added years of trouble free satisfactory performance.

Write, wire or phone TODAY for literature, prices and name of nearest distributor. Learn why it is more profitable to SELL Cooper - than to sell AGAINST it.

BUILT FOR THOSE WHO WANT THE BEST

**COOPER
MANUFACTURING CO.**
127-729 South First Avenue
MARSHALLTOWN, IOWA





Steel Wool



Masking Paper



Abrasives



Tack Cloths

"Saves Time"



PERMACEL[®] TAPE

AND REFINISHING SUPPLIES

a Johnson-Johnson company

Pop O'Neill

Continued from Page 110

"By the way," Pop picked up the extinguisher Larry had discarded. "What happened to this? Did you check it out first of the month like you're supposed to do?"

This time it was Larry's turn to fumble. "Oh, I gave it a quick check few weeks ago. Seemed OK then."

"Yea, I bet you gave it a quick

check. That's the trouble around here. We're so damned quick; but we might be a bit more thorough. Just how did you check it?"

Larry shrugged. "I—Hell, Pop, I got more to do than ride herd on extinguishers. I'm a mechanic, not a fireman."

The short hair on Pop's neck bristled. "That's where you're

wrong, son. Everybody's a fireman in my place from now on. Everybody's responsible for any fire in this shop. And by cracky everybody's going to get some tips on how to check and use an extinguisher."

There was absolute silence for a while, while two mechanics reflected on the near tragedy. Then Larry said, "I quite agree with you for once, Pop. And from now on there won't be any quibbling about shop tidiness. I want to live a while and if I have to work, might just as well work here."

He went back to the Chevrolet and Tommy began to shovel up the blackened sand. "I wanted to tell you what happened this morning, Pop," he said finally.

"Yea, what was it, son? I cut you off pretty brisk like didn't I?"

"Well, I didn't take that junk to the dump this morning."

"No? Well where were you for two whole hours?"

"I took it down to Abe's second hand store."

"What? You sold it? You actually got money for that stuff?"

"Yea. Abe's daughter bought that old chair—paid twelve dollars for it. She said it was a period piece. And some of them fruit vases and candlesticks. She gave me fifty cents apiece for them. Said they would sell fast."

"Well, good for you. You use that head for something besides holding ear-muffs at that. What'd you get for the load?"

"Forty dollars in all." Tommy looked worried. "But it was on your time. I know I shouldn't have done that."

Pop laughed. "Well, don't mind that. I just figured you were trying to get out of the little job I had for you. Wish to heck you had now," he added.

Tommy handed him the money.

"We'll buy a new extinguisher with it. How's that?"

"Complete with fluid," the boy said.

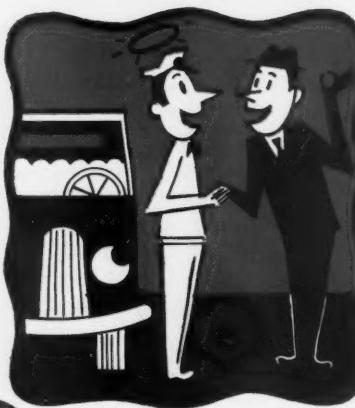


Be safe... be sure! Install Corbin Self-Tightening Hose Clamps

Customers appreciate the extra protection you give them when you install Corbin Self-Tightening Hose Clamps... like the way they provide permanent tension for a positive seal in all kinds of weather. You'll like them, too!

For Corbin Self-Tightening Hose Clamps can be installed quickly and easily... eliminate the need for nuts, bolts or screws... tighten automatically. Made of high quality heat treated spring steel, they resist rust and corrosion... grip hose evenly and smoothly... never lose their spring or tension. With Corbin Hose Clamps—the original permanent tension clamps—you're assured of tight, everlasting connections, even on irregular castings, tube or hose. Try them and see.

Get prompt service... order through your jobber today. Corbin Self-Tightening Hose Clamps are available in all sizes from $\frac{3}{8}$ " to $2\frac{5}{8}$ ". Corbin Hose Clamp Div., The American Hardware Corporation, New Britain, Connecticut.



Self-Tightening HOSE CLAMPS

The happy people are those who are producing something; the bored people are those who are consuming much and producing nothing. Dean W. R. Inge



Today, more than ever before, ADVERTISING MUST INFLUENCE YOUR CUSTOMERS!

You don't have to be told that advertising is a powerful sales force that can help you sell more, sell easier and at greater profit. Nor do you have to be told how necessary it is today, with everyone competing for the consumer's dollar and with all the direct competition you have, to have some powerful advertising working for you. You need it for the sales job that has to be done.

But don't make the mistake of thinking any advertising will do. To do *you* any good, advertising must be seen and read by the people you can count on to become your customers. And it must in-

fluence these people favorably toward the products you sell.

If you are typical of the majority of the car dealers and automotive shop owners in the nation, you are located in Country-Side America. And, if your supplier is helping you by consistent advertising in the Country-Side Unit, you're lucky. That kind of advertising support was tailor made for you.

The Country-Side Unit has become the largest sales force among the 19,000,000 families who make up America's biggest automotive market because it meets the needs of this market as nothing else does. It has tremendous impact among

the people you must count on as your customers. Advertising in the Country-Side Unit for the products you sell influences these people favorably toward those products. It gives you coverage among the best customers in your territory like a local newspaper with impact that pays off in sales.

CSU
Farm Journal
The magazine farm families depend on
Town Journal
The magazine town families depend on

Spring Profits

Continued from Page 46

falls to the personnel. The amount of extra business a shop gets within the next few months depends on how well it promotes and sells for Spring.

On these pages are reminders of the many spring specials that can be featured. Basic equipment to carry out these service specials and some of the parts, merchandise and

specific repairs that should be promoted are also offered in the following columns.

Equipment

To give good spring Tuneup service the shop should have: A dynamometer, compression gauge, vacuum gauge, combustion analyzer, timing light, regulator tester, dis-

tributor test bench, spark plug cleaner and tester and a battery charger on hand.

For front end work Wheel balancer, tire truer and aligning equipment.

For cooling system service: Reverse flusher, flow tester and thermostat tester.

Other Services

Aside from the usual spring changeover jobs, the shop should continue to promote other services it offers. Body work, paint jobs, glass replacement, wash and polish, tire rotation, and shock absorber replacements are examples.

Now is the time to check the parts inventory and see to the proper placement of displays, signs and other point-of-sale materials. General merchandise such as accessories, radiator sealers, rust inhibitors, tires and miscellaneous lubricants are best sold when they can easily be seen by the customer.

Weller
SOLDERING GUNS
801 Packer Street, Easton, Pa.

THE FINEST TOOLS FOR THE FINEST CRAFTSMEN

extra jobs with its 2 new accessory tips—one for cutting, one for smoothing. Order from your Distributor, or write direct for catalog bulletin.



There are many good reasons why shops need sound promotion and selling methods in the Spring or any other time. It's a fact that: 1. There are approximately 50 million vehicles on the road. 23 million need or will need major repairs. All need preventive maintenance.

The prospects are there and the shop that tells the world it has the proper equipment and knowhow on hand can't help but steer more busi-

(Continued on page 118)



Captain Berman sent 5919 miles for Royal Triton



Here are excerpts of a letter we received the other day from Captain John J. Berman, U.S. Air Force, stationed in England. We think it demonstrates the tremendous loyalty of Royal Triton customers far more effectively than anything we ourselves could tell you—

"Please advise if you have an agent in England or in Europe where I could purchase Royal Triton motor oil.

"Since I have used Royal Triton in all my cars since 1948, I do not want to change to another brand except as a last resort. I am

now down to my last two quarts, and still have two more years of duty in England.

"...if you can ship me a case of Royal Triton 5-20, please do so and advise. Thank you."

P.S. Captain Berman got that case of Royal Triton 5-20.

**UNION OIL COMPANY
OF CALIFORNIA**

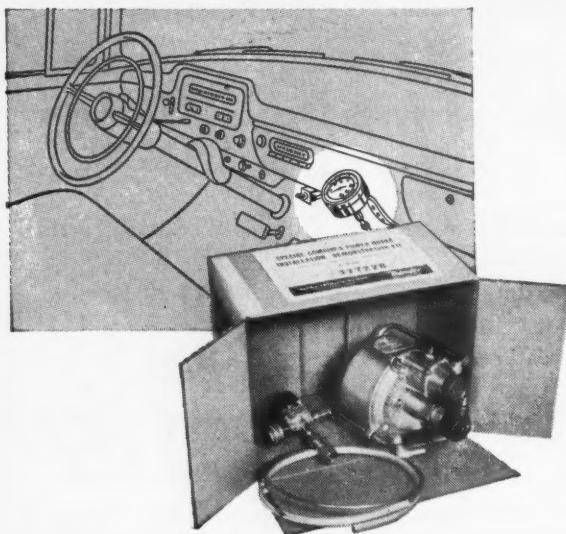


Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago:
1612 Bankers Bldg. • New Orleans: 644 National Bank of Commerce Bldg.
Atlanta: 401 Atlanta National Bldg. • Kansas City, Mo.: 612 W. 47th St.

DEMONSTRATION SELLS P



the silent, powerful, convincing,
BENDIX POWER BRAKES



SPECIAL LOW-COST DEMONSTRATION KIT FOR YOUR OWN CAR STARTS YOU IN THE BIG, NEW POWER BRAKE BUSINESS

Now you can demonstrate Bendix Power Brakes with just the flick of a switch! This special Bendix Demonstration Kit for your own car will quickly start you on the way selling power brakes. It comes complete including all installation parts and a manual "on-off" demonstration switch and valve.

You merely take your prospect for a short ride. Let him drive. Let him brake the ordinary way—without power brakes. Then you flick the switch—conveniently mounted on the dash—to "on" and let him brake with the Bendix Power Brake in action. Here's dramatic, positive proof why he should have a Bendix Power Brake. And he'll realize it, too!

POWER BRAKES!



, profit-packed way to sell FOR PASSENGER CARS!

Now is the time to get into the power brake business. The market is ready-made! The demand is heavy! The profit-picture is one of the most liberal you'll find! And here's the best part of it . . .

With the Bendix* Power Brake, you can get into this fast-moving business right away and get your share of sales in short order. All at a very low investment on your part, too!

Installation is quick and easy. For most cars, it takes less than an hour. There are only three simple connections to make and anyone around your shop can make them.

Call your local Bendix Power Brake distributor. He'll show you how to get going *right now* in the power brake business. Or write direct to factory Service Sales Department.

*REG. U.S. PAT. OFF.

**PRODUCT OF THE WORLD'S
LEADING BRAKE MANUFACTURER**



BENDIX PRODUCTS DIVISION SOUTH BEND, INDIANA
Export Sales: Bendix International Division, 205 E. 42nd St., N.Y. 17, N.Y.
Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada

STROMBERG* CARBURETORS—Cars, Trucks, Industrial •
BENDIX VACUUM POWER—Power Brakes—Passenger Cars,
Trucks, Trailers • **HYDRAULIC CONTROLS**—Power Steering
—Passenger Cars, Trucks, Trailers, Buses, Industrial, Agricultural •
BENDIX BRAKES—Factory-New Lined Shoes, Lining Segments,
Repair Parts • **BENDIX* METALCLENE**—Metal Parts Cleaner •
BENDIX* ECONOCLENE—Multi-Purpose Cleaner Concentrate.

Spring Profits . . .

Continued from Page 114

ness to its doors. These cars must have the automotive shop's service. 2. A recent MOTOR AGE survey shows that at least 12% of all cars on the road should have body work done.

Few car owners will bother to have minor body work done unless the idea is sold to them. Don't goof on DOOF.

3. Another MOTOR AGE survey revealed that of 10,000 cars inspected over 5000 different services were needed on safety items alone.

These jobs were items that the owners had to get done for their own safety and peace of mind. Consider how much more work could have been sold if the customer had been aware of it.

4. The customer who has stopped in for service is the best prospect for other sales.

The shop's best sales market is its present customers. They're more likely to buy extra services if they are reminded while they are in the shop.

5. Most predictions see 1955 as another big production and sales year for the automotive industry. Many believe there will be 60 million vehicles on the road by 1957.

We know the market is big now and we can be reasonably certain it will continue to grow at a fast pace in '55. A good sales job will get a slice of this market for the shop. A good courteous service job will keep it.

Remember—to SELL them service—TELL them and SHOW them.

For more on spring profits, see pages 47-48-49.

One of every six American businesses is automotive.

NADA Elects Yarnall At 1955 Convention

Frank H. Yarnall, Yarnall Chevrolet, Inc. Chicago, has been elected president of the National Automobile Dealers Association.

Other newly elected officers of the Association, which concluded its annual convention in Chicago recently, were Carl E. Fribley Norwich, N. Y., first vice-president; J. J. Verschoor, Mitchell, S. D., secretary, and Allan Mims, Rocky Mount, N. C., treasurer.

A high spot of the convention, which was attended by more than 12,000 dealers from across the nation, was the announcement by the NADA national affairs committee that it would support efforts to eliminate bootlegging and phantom freight charges by means of legislation. Fred Bell, executive vice-president of the Association, said that "one last plea" was being made to auto manufacturers to work with dealers in correcting industry evils, and that if dealers seek federal legislation, it is only because "every alternative has been denied us."

JOYCE
ANNOUNCES THE NEW
BUMPER-UPPER
HYDRAULIC JACK!

THE ONLY COMBINATION
HAND and AIR
OPERATED BUMPER JACK
MODEL 7-11

Check these features . . . 1 1/4 ton capacity . . . lifts cars by bumpers or bumper brackets . . . jack rises on needle bearing rollers . . . castered rear wheels, non-castered front wheel give quick spotting . . . power unit gives smooth, even rise with automatic shut-off at top . . . adjustable contact pads lined to protect bumpers . . . automatic safety latch. Also available in hand operated model only . . . model 7.

SEE WHY BUMPER-UPPER IS YOUR BEST EQUIPMENT
BUY . . . WRITE FOR COMPLETE INFORMATION TODAY!

THE JOYCE-CRIDLAND COMPANY
IN CANADA: MIDLAND FOUNDRY & MACHINE CO., LTD., MIDLAND, ONT.
DAYTON 3, OHIO, U.S.A.

JOYCE JACKS

Wash cars in $\frac{1}{3}$ less time!

NEW DUPONT SPEEDY car wash pouch

**MADE OF DACRON*—Exclusive—Patent Applied For
Self-Sudsing—Long Lasting—Flush-As-You-Wash!**



JUST PUT IN **DU PONT CAR WASH**
AND ZIP POUCH SHUT! **CLEANS**
EVERY PART **OF CAR WITH FRESH**
SUDSING **ACTION: MAKES NEW**
SUDS AS IT GOES!

New Du Pont Speedy Car Wash Pouch takes off dirt, grease and grime faster, more profitably! Feeds fresh Du Pont Car Wash suds to each part of the car—loosens stubbornest dirt at one swipe. With hose, operator flushes while washing—once over does the whole car! New Du Pont Speedy Car Wash Pouch is made of long-lasting Du Pont "Dacron"—strong, fast-drying, mildew-resistant. Saves time, saves car wash, makes money for you! Dealer cost \$2.75 *Reg. trade-mark for Du Pont's polyester fiber.

For more information and name of nearest wholesaler stocking this new item, clip and mail to: Du Pont Co., 7010-B Du Pont Building, Wilmington, Delaware.

Please have nearest wholesaler give me more information about Du Pont Speedy Car Wash Pouch.

Name _____

Address _____

City _____ State _____

DU PONT
REG. U.S. PAT. OFF.

Better Things for Better Living
...through Chemistry

DU PONT NO. 7® PRODUCTS
"FROM CHEMICAL RESEARCH...FOR EASIER CAR CARE"



**lightest and most powerful
1/2" drive in its field!**

- RUNS NUTS
- DRILLS
- REAMS
- DRIVES SCREWS
- SAWs HOLES
- WIRE BRUSHES
- TAPS
- BORES WOOD
- DRIVES STUDS
- DRILLS MASONRY

You'll be amazed at the power you get from this new leader in $\frac{1}{2}$ " drive Air Impactools. Actually does all work which previously required two or more tools. Handles all but the largest nuts and bolts on cars and trucks. Ideal for close-quarter work. Reduces arm fatigue in any working position. Standard attachments convert tool for multiple uses and multiple savings.

The new 404 will help YOU turn out more jobs in less time . . . for more profit. Seeing is believing. Your Ingersoll-Rand jobber will demonstrate this sensational tool in your shop now. Give him a call today!

18A-172

Ingersoll-Rand

11 Broadway, New York 4, N.Y.



Originators of Impactools

AIR & ELECTRIC

Dirty Trick . . .

Continued from Page 50

All of these innovations place an added burden on the engine's cooling system. Where older model engines had combustion chamber temperatures which seldom exceeded 2700 deg F, these new high compression engines develop combustion chamber temperatures above 4000 deg F.

Hydraulic valve lifters, for example, require good and rapid cooling of lubricants to help prevent varnish formation and to maintain quiet tappet operation. For those new cars with torque converters using an inter-cooler connected to the cooling system, a uniform temperature of the coolant and torque-converter fluid must be maintained at all times.

The cooling systems have been improved to take care of this increased burden. Pressure caps are now installed to increase the boiling point of the coolant which increases the efficiency of the radiator and water pump.

Radiator top tanks have been strengthened to withstand greater pressures and have been reduced in size. Cooling system arrangements have been altered to provide better valve and combustion chamber cooling. More efficient water pumps, better coolant distribution and increased coolant flow rates are other improvements which help these new engines meet the greater demands made on them. Today's engines are actually not "cooler-running engines," but they are *more efficiently cooled engines*.

The notorious indifference of the average car owner to the care of his car's cooling system creates the biggest preventive maintenance problem. With still newer and more radical engine developments in the 1955 models, the need for spring cooling system cleanout and conditioning grows in importance, if these cars are to maintain the finer performance which has been engineered into them.

Spring housecleaning an engine requires that the cooling system be drained, cleaned and flushed out and water with a good rust inhibitor be added. All cooling system parts, hose, fan belt, water pump,

gaskets should be checked and necessary replacements and repairs should be made.

When this job is done in spring and fall, the car owner prevents rust, scale and corrosion from forming in the cooling system chamber. These deposits form a coating on the combustion chamber walls, holding the excessive heat snug around the moving parts and may cause overheating and severe engine damage during hot summer driving.

The resulting loss of cooling efficiency can cause these engine troubles: 1. Burned valves. 2. Ping, knock and vapor lock. 3. Poorer lubrication leading to increased engine wear. 4. Sticking valves and valve lifters. 5. Shorter sparkplug life. 6. Engine "hot spots" which can strain-crack engine parts.

The engine's cooling and lubricating systems have a close interdependence. Failure of the cooling system to cool the engine oil will cause it to thin out and lower its lubricating value. The increased temperatures, horsepower and road speeds of these new engines throw an added burden on both the lubrication and cooling systems. To neglect them may prove disastrous during warm summer months.

Another precaution that is being ignored by many car owners is the use of water as a summer coolant. Water with an inhibitor is recognized by automotive, anti-freeze and oil company engineers as the best summer coolant. Old antifreeze should be removed. Its additives become depleted and acids and "gunk" accumulate that can injure the car. Remove the antifreeze at spring engine cleanout time and put in water with a low mineral content, plus a summer inhibitor.

Do a good spring housecleaning of the engine cooling system and it will be ready for those long summer drives ahead!

A man in a bar saw a drink advertised as the Stars and Stripes. Upon ordering one he saw that it consisted of several different liquids and colors giving a striped effect.

He said to the bartender, "I see the stripes, but what about the stars?"

The bartender replied, "Drink the stuff and you'll see them."

lightest and most powerful 1/2" drive in its field!

Never before has so light an electric tool been able to do so many of your jobs so fast and easily. The new 5U's 25% more power handles all but the largest nuts and bolts on cars and trucks—makes this Impactool ideal for use on today's high compression, high torque engines. You get extra speed and power on universal joint and angle head jobs. You get multiple uses with easy-to-apply standard attachments.

For time, effort and money savings, nothing can compare with the new 5U. See a demonstration of Ingersoll-Rand's 2U, 5U, 8U and 34U Electric Impactools in your shop now. Call your Ingersoll-Rand jobber today!

18-173

- RUNS NUTS
- REAMS
- DRIVES SCREWS
- SAWs HOLES
- DRILLS
- WIRE BRUSHES
- TAPS
- BORES WOOD
- DRILLS MASONRY
- DRIVES STUDS

Ingersoll-Rand

11 Broadway, New York 4, N.Y.

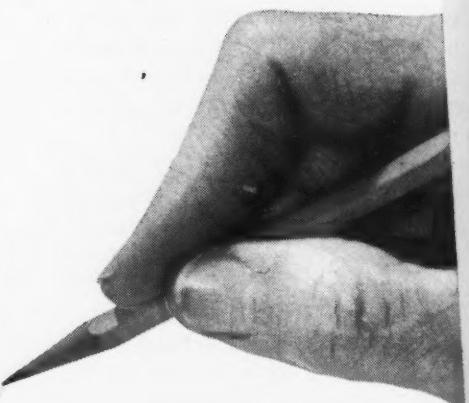
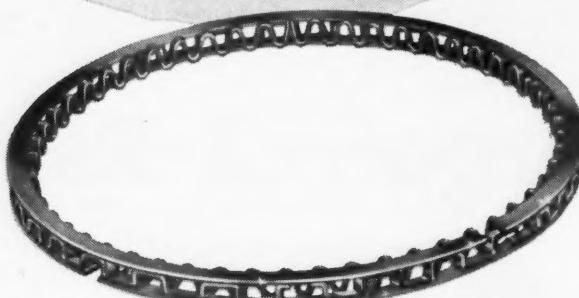
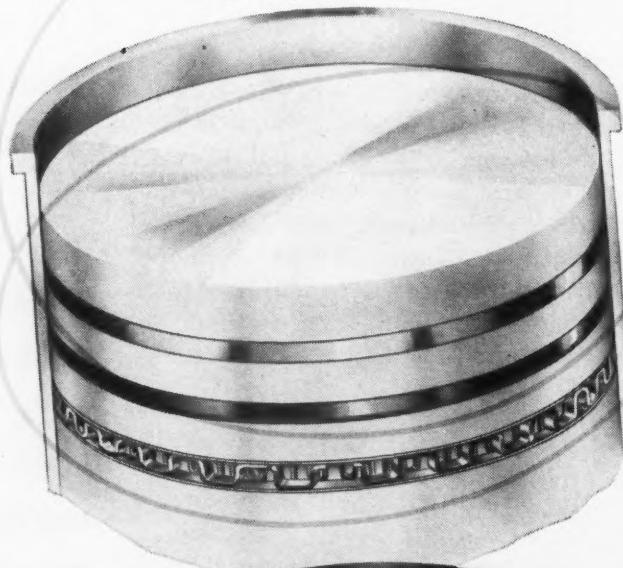


Originators of Impactools

AIR & ELECTRIC

Pedrick

Equal
pressure
everywhere



means
a perfect
seal!



FORMFLEX CHROME RING SETS

Bring Engines "Back to Life"...

At a Price Your Customers Will Pay!

Now, with Pedrick Formflex Chrome Ring Sets, you can do "ring jobs" again—thanks to the amazing, exclusive "Equalizer!" This revolutionary feature gives you a truly *all-purpose* installation guaranteed to outlast and outperform in any engine—slightly worn, badly worn, rebored, resleeved or new.

The "Equalizer" provides soft but positive, uniform pressure *all around* the cylinder wall . . . a correct seal with no drag, no high or low spots . . . a new standard in oil control efficiency. A Formflex "ring job" will restore engine power and pick-up, improve gas mileage, reduce oil consumption, assure better and more dependable performance.

ADD IT ALL UP . . .

With Pedrick Formflex Chrome Ring Sets you can avoid many a costly overhaul—do a satisfactory "ring job" *at a price your customer will pay*. Call your Pedrick jobber today—find out how you can get *back* in the ring business!



A "New Engine"
in Every Box!

DEPEND ON

Pedrick
FOR THE RIGHT RING JOB!

WILKENING MANUFACTURING CO.—Philadelphia 42

Monkey Business . . . Continued from Page 57

tory-new appearance. The other side was left in its deplorable state of disrepair. The car was then decorated with "before and after" advertising and put out on the street where it served as an excellent drawing card.

Probably the best source of free publicity John's body shop has ever had are his monkeys. Two Rhesus

monkeys were given to John as a gift from the boys in the shop several years ago. John put them on display in various locations in the shop and around town where they created considerable curiosity.

But the real publicity came from the numerous times the animals ran AWOL through the neighborhood. Newspapers picked up the

stories each time and the publicity John's body shop received could never be bought at any price.

Then there is the two way Olds which never fails to cause a sensation wherever it is seen. John originally built a double ended car from two 1940 Plymouths, which he later sold. His new crowdstopper is a perfect union of two 1948 Oldsmobiles. Only the tail lights in place of the parking lights distinguish the front from the rear. The car has a wheelbase a little longer than a Cadillac, a rebuilt engine, and new Hydra-Matic transmission. It handles beautifully on the road. The state of Delaware had a little trouble classifying it for license tags, however, finally deciding that it is a car and that it meets all safety requirements. The only safety problem lies in the passing motorist's interest who forget the road as they look at this strange beast.

All's not monkey business at John's body shop, however. John does top quality work at fair prices, and that's the real key to his success. His \$69.50 paint jobs are well known throughout the area and it's not unusual for his spray booth to have four or five cars waiting to go through by ten o'clock in the morning. They average 40 paint jobs weekly.

The success of John's business has forced expansion time after time until he now occupies an area about one half block. A modern communications system throughout his series of separate buildings makes it possible for the office to converse with anyone on the property at any time.

"Word-of-mouth" is John's best advertising medium, accounting for 80 per cent of his business, John estimates. The high quality of the paint job resulting from top quality materials applied hot in a spray booth and baked in a drying oven assures a good job.

"We enjoy our promotion efforts," says John, "But even more we enjoy the satisfaction of doing a good job at the right price. We have made a lot of friends and had a lot of fun. We eat well, too!"

the EIS HYDRAULIC BRAKE BLEEDER TANK *

**works better—
like a bleeder should!**

**LOWEST PRICED IN ITS SIZE—
NO WRENCHES NEEDED—
NO BULKY COUPLINGS IN THE WAY!**

There's nothing better for bleeding brakes than an EIS Hydraulic Brake BLEEDER TANK. It's engineered to save time and brake fluid—assures a perfect bleed job—everytime.

SUGGESTION—Brake bleeding on booster-equipped trucks can be mighty troublesome. Try it with an EIS BLEEDER TANK and you'll see!

NOW READY! Adapter Plug for 1955 Chrysler Products Master Cylinders. Ask for No. T655.

NO. T664
FILLER NOZZLE



REFILL WITH EIS SAE BRAKE FLUIDS



These BLEEDER TANKS
ARE IN STOCK AT YOUR
EIS DISTRIBUTOR

EIS AUTOMOTIVE CORP.
Middletown, Conn.



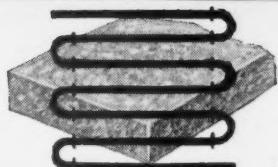
**"Is your wife a club woman?"
"No, mine's strictly a dish
thrower."**

How electronically baked cork makes better gaskets

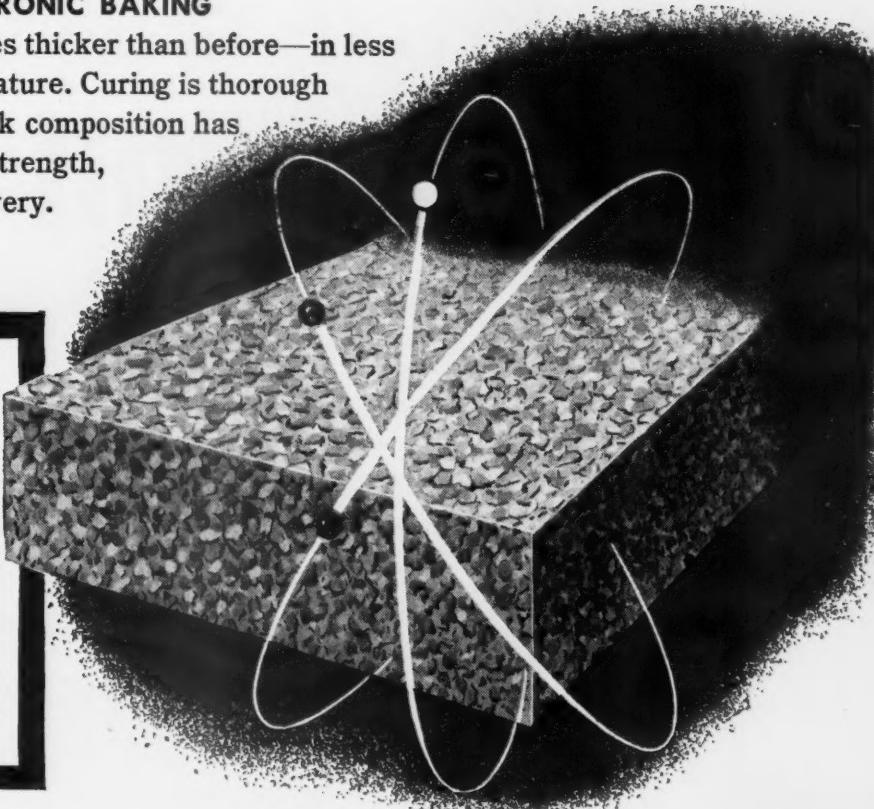
ONLY Armstrong-Victor HAS THIS NEW PROCESS

NEW HIGH-FREQUENCY ELECTRONIC BAKING

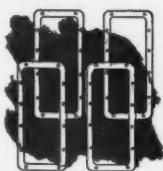
cures a 9-inch thick mat—3 times thicker than before—in less than 5 minutes, at lower temperature. Curing is thorough and uniform inside and out. Cork composition has more uniform density, tensile strength, range of compression and recovery. Color is lighter and brighter.



OLD-FASHIONED BAKING with steam coils took hours to cure a 3-inch thick cork composition mat used to make gaskets. Results were uncertain. Too often, the cork was under-cured on the inside—or over-cured on the outside. This caused widely varying density—loss of strength—reduced compression-recovery range—and poor color.



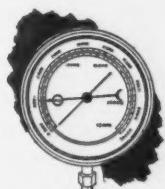
Means Better On-the-Job Values in A-V Gaskets



UNIFORM DENSITY of cork composition means gaskets are uniformly strong in every square inch...have better compression and recovery values...and thus have more "live" and lasting sealing power.



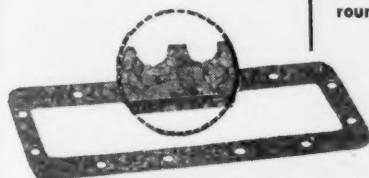
UNIFORM STRENGTH of cork composition means that A-V gaskets take shop handling without harm—are more flexible—fit better—are less likely to crack or break. They're die cut sharp and clean with round holes and straight sides.



UNIFORM COMPRESSIBILITY and recovery means that A-V cork gaskets help you make and hold a tighter seal longer than gaskets made from steam-cured cork. Tests show almost 100% uniformity of recovery.



FACTORY-FRESH TO YOU . . . in sealed, protective packages . . . the world's most complete gasket line . . . stocked by Victor Jobbers everywhere. Sold in sets or individual parts . . . for every make and model. Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Illinois.



Only genuine Armstrong-Victor Replacement Cork Gaskets have this exclusive trade-mark—the 2 notches.

Armstrong-Victor

CORK GASKETS • RUBBER GASKETS • METAL GASKETS

"Clean up" in BIG, NEW

FRAM Clean Oil Month PROMOTION!



This colorful advertisement in *Collier's* and *Saturday Evening Post* tells millions of car owners to look for FRAM's Clean Oil Month billboard tie-in streamers—to see you for oil and filter service!

It's time to pile up filter and cartridge profits during FRAM's big, new Clean Oil Month promotion! That means thousands of colorful Clean Oil Month billboards from coast-to-coast! That means big FRAM advertisements in *Collier's* and *Saturday Evening Post*! ALL sending you customers for oil and filter service!

Customers Prefer FRAM More Than 2 to 1

Here's where FRAM really pays off! Survey after survey shows *motorists prefer FRAM more than 2 to 1* over other brands . . . and in many of these same surveys, preference for FRAM is greater than the preference for the next two most popular brands *combined!*



**GET YOUR TIE-IN
STREAMER UP NOW!**

FRAM CORPORATION, Providence 16, R. I.
Fram Canada Ltd., Stratford, Ont.

A large-scale billboard advertisement for FRAM Filters. The top half of the billboard features the words "OIL MONTH" and "FRAM FILTERS" in large, bold, sans-serif type. Below this, a black and white photograph of a classic sedan is shown from a front-three-quarter angle. A large, cylindrical FRAM filter is mounted on the front fender of the car. The bottom half of the billboard has a textured, grid-like background. The words "CHECK OIL AND FILTER NOW!" are prominently displayed in large, bold letters. At the very bottom, there is a line of text that reads "NEAR DEALER CALL WESTERN UNION OPERATOR 25." The entire advertisement is set against a dark, textured background that looks like a city skyline at night.

New Products

Continued from Page 62

169

Headlight Dimmer

Dynotron Corporation: This maker announces an electronic automatic headlight control. The Dynotron dimmer incorporates an electronic delay in its circuit to provide for smooth and positive control of car headlights under all operating

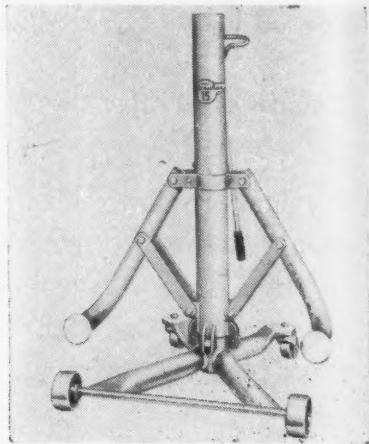
conditions, it is claimed. The entire unit, including a lens and photo-electric circuit, is enclosed in a small metal case. Lights from an approaching car serve to actuate the dimmer which switches the car's headlights to low beam and returns them to high beam after the car has passed. The electronic

holding action prevents flickering of the headlights in passing a string of cars, according to the maker.

170

Service Jack

Milwaukee Hydraulic Products Corp.: The Milwaukee Model 15 Twin Lift 1½ ton hydraulic service jack features full tubular construction giving the jack maximum strength and minimum weight—94 pounds.



here's a man MAKING MONEY

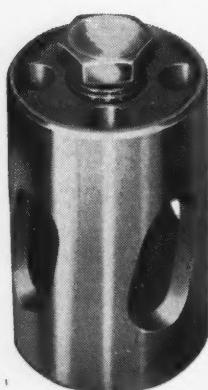


HOW By installing Johnson Adjustable Tappets, made expressly for 1932-53 Ford and Mercury V-8's.

WHEN Every time an engine needs a valve job, he recommends installation of Johnson Adjustable Tappets at the same time. As you easily see — he does ONE JOB, but MAKES TWO PROFITS. (Of course, Johnson Adjustable Tappets can be installed at any other time.)

WHY He realizes the huge possible replacement market for Johnson Adjustable Tappets — over 100,000,000 Tappets, and he is getting his share. He knows, too, how easily Johnson Adjustable Tappets are installed without expensive shop equipment.

WHERE He makes money right in his own shop — buys his Johnson Adjustable Tappets from his nearest jobber. So can you.



"Tappets are our business"

JOHNSON JP PRODUCTS
INC.
MUSKEGON, MICHIGAN

According to the maker, its lifting arms are adjustable from 9 in. to 40 in. lifting width and are flanged at ends to assure correct saddle contact and safety. The jack is portable with large front wheels and dual casters that are said to allow fast over-the-floor movement and also permit forward or backward adjustment of jack during lifting and lowering operations. The hydraulic post is fitted with 8 guide rollers to prevent binding under off-center loads.

171

Reamer

Vaco Prod's Co.: This tapered reamer enlarges undersize holes from $\frac{1}{8}$ in. up to a maximum diameter of $\frac{3}{8}$ in. It can be used for metal, wood, and plastic. In addition, the tool aligns off center holes for bolting or screwing metal straps together. It is also available without a handle, for use with screw driver, interchangeable kits, and all standard hand power or electric drill chucks.

(Continued on page 132)

"My Chevrolet



Independent Servicemen
get these

4

Big Benefits



1 Technical help in Service problems

Booklets like the Repair Manual help you solve tough problems quickly by showing best and quickest installation methods. On all tricky service problems, see your Chevrolet dealer.



2 A complete line of Chevrolet parts

Your Chevrolet dealer is one, convenient source for all Chevrolet parts—not just a few, but all of the more than 22,000 parts serviced. He can assure prompt delivery.



3 Increased service efficiency

The right parts do the job best. They are made to fit right . . . function better . . . last longer. It pays to do business with your Chevrolet dealer — your partner in service.



4 Quality you can depend on

Your Chevrolet dealer handles Chevrolet parts that are precision-built for dependability. Buy your Chevrolet parts from the man who specializes in them — your Chevrolet dealer.

Tie in . . . cash in!

LIFE advertisements like this create demand for and pre-sell your customers on Genuine Chevrolet Parts. Take advantage of this national advertising by using Genuine Chevrolet Parts. It's just good business!



**Now more than ever—
YOUR CHEVROLET DEALER IS
READY, WILLING AND ABLE
TO SERVE YOU !**

Protect



It is reported that over 4,000 children under 15 years of age were killed in traffic accidents last year . . . You can help cut down this unfortunate toll. Remember—*safe brakes save lives . . . So,*

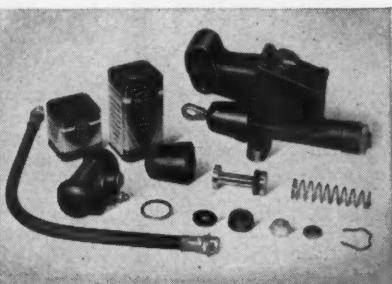
urge your customers to have brake systems checked at least every six months. Use genuine Wagner Brake Service Products for any necessary refills, repairs or replacements.



WAGNER SHOE EXCHANGE SETS. Available "bonded-on" or "riveted-on" for all popular cars and light trucks with both standard and over-size lining thicknesses.



WAGNER CoMaX BRAKE LINING. Available in sets, rolls, blocks, slabs, segments, and shoe exchange sets. Coverage is complete for every Car, Truck, or Bus.



WAGNER LOCKHEED BRAKE PARTS. These replacements are manufactured to the same specifications as parts used in complete assemblies for original equipment.

Est.
1891

Wagner

*...the best known
name in brake service*

WAGNER HYDRAULIC BRAKE PARTS, AIR BRAKES, TACHOMETERS, ELECTRIC MOTORS

Their Lives!

SAFE BRAKES SAVE LIVES

and your choice of the brand of brake fluid could mean the difference between an accident and a safe stop

for safety's sake...use genuine

WAGNER® LOCKHEED BRAKE FLUID

It's chemically balanced...Surpasses S.A.E. specifications...There's none finer...none safer

When you select a fluid to pour into a brake system, remember that human lives depend on its safe, sure performance under all driving conditions. Your customers seldom see or specify the brand to be used. They literally stake their lives on your judgment and integrity. Fulfill that trust and prevent needless sacrifice of human lives. Standardize on performance-proven Wagner Lockheed—America's No. 1 Brake Fluid.

Wagner Lockheed Brake Fluid is scientifically processed in the world's largest and most modern plant devoted exclusively to the production of brake fluid. Its chemically balanced formula enables it to function perfectly in all seasons and under all driving conditions...to thoroughly lubricate the system...to mix with all approved fluids. It protects the brake system against dangerous vapor locks, freeze-ups, gummy residue deposits, swelling of rubber parts, and rusting and corroding of metal parts.

Just two Wagner Lockheed Fluids are required to meet all service needs. 21 is for passenger cars operating under moderate conditions. 21-B Heavy Duty is for trucks, buses, and cars where a heavy-duty type fluid is recommended. Available in 12 oz., quart, gallon, 5-gallon, 30-gallon, and 54-gallon containers. Get it and all your brake service products from one safe, reliable source—your nearest Wagner Jobber.

You can depend upon WAGNER QUALITY because Wagner Products are used as original equipment by car, truck, trailer, and bus manufacturers.

BOOST YOUR PROFITS BY BECOMING A
WAGNER FRANCHISED DEALER



Waggoner Electric Corporation
6498 PLYMOUTH AVE., ST. LOUIS 14, MO., U.S.A.

(Branches in principal cities in U.S. and in Canada)
Fill out and mail coupon for full facts on this profitable
program that's sweeping the country. No obligation.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____



H55-5



New Products Continued from Page 128

172

Mower-Starter

Jacobsen Mfg. Co.: The first self-contained electric starter for home power lawnmowers operates on the same principle as the starter on automobiles, according to this maker. The operator presses a button with a touch of the toe and the en-

gine is started eliminating the starter pulling system. The starting motor operates on 6 volts, 40 amperes, has frictionless bearings and heavy-duty windings. The 6 volts, 7-plate battery, can produce more than 400 starts, the equivalent of two full seasons of use under normal operating conditions.

The advertisement features a large central image of a car's front end, specifically the hood and grille area, with a Fel-Pro Felcoid oil pan gasket installed. Three bold, slanted text statements are overlaid on the image: "SHRINK RESISTANT!" at the top, "ALWAYS FRESH!" in the middle, and "ALWAYS A PERFECT FIT!" at the bottom. To the left of the main image, there is descriptive text and a photograph of a hand holding a piece of Felcoid material. The text reads: "It's a special Fel-Pro formula that makes Felcoid so tough, you can bend it, flex it, fold it, without affecting its sealing power. Because it is a homogeneous material, it maintains its shape insuring easy installation. Because this amazing material can be folded to fit into SMALLER CARTONS, it means easier handling and stocking of entire Fel-Pro Gasket sets... head sets, oil pan sets, full sets and push rod cover sets." The Felcoid logo, which is a diamond shape containing the words "FEL-PRO", is located in the bottom left corner.

...it's a **FEL-PRO** **felcoid** oil Pan Gasket!
FELT PRODUCTS MFG. CO., 1521 Carroll Ave., Chicago 7, Ill.

The heavy-duty, pushbutton contact switch motivates a chain drive to an over-riding clutch mounted on the engine crankshaft. The clutch automatically disengages when the engine starts, according to the company.

173

Power Mower

Western Tool & Stamping Co.: When the throttle is opened on the "Lawn Scout" the clutch engages automatically. When the throttle is retarded it disengages, but the engine remains running, according to the



maker. The mower has a cutting width of 18 inches, adjustable cutting heights and a four-cycle, one H.P. Briggs & Stratton engine.

174

Adhesive Kits

Minnesota Mining and Manufacturing Co.: This maker announces two new automotive adhesive kits that contain an applicator gun and a supply of adhesive. One includes four 7½-oz cans of 3M Super Weatherstrip Adhesive, and the other provides four 7½-oz cans of 3M Weatherstrip Adhesive (black). The cone-top cans are disposable, and the gun which attaches to the top of a can is a pistol-type pump with a drawn spout. The spout has a screwdriver tip and can be swiveled to get into any area without tipping the adhesive container.

(Continued on page 135)



MEDIA ON YOUR MIND?... Then buy the magazines that are on most people's minds . . . follow the reader and you'll use the *recognized* leader, right across the board. The publication most readers prefer is the most profitable for you . . . Ladies' Home Journal, Time, Life, Farm Journal, each the leader in its field . . . and **TRUE**, *America's largest selling man's magazine!* If you have a product for men, it belongs in **TRUE**. Guarantee, 1,750,000 ABC . . . A Fawcett Publication, New York, Detroit, Chicago, San Francisco, Los Angeles.

NEW BLUE SUNOCO AUTO ENGINEERS' FIRST CHOICE

Another reason why Sunoco Dealers, on the average, pump twice as much gasoline as competitive dealers

1,042 Automotive Engineers tried New Blue Sunoco in their own cars . . . compared it with other gasolines. Here's what those who formerly used premium-priced grades reported.

95% say

New Hi-Test Blue Sunoco equals or excels "premiums" for over-all performance

93% say

New Hi-Test Blue Sunoco equals or excels "premiums" for power and pick-up

80% say

New Blue Sunoco equals or excels "premiums" for anti-knock performance

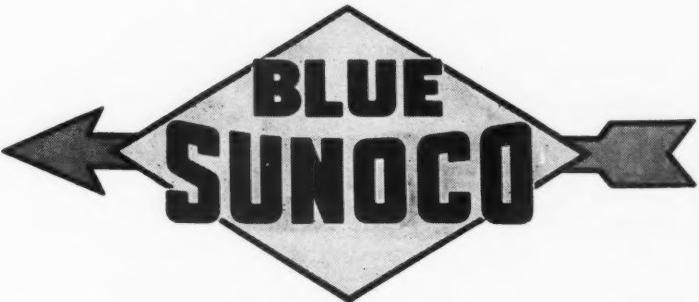
84% say

New Hi-Test Blue Sunoco equals or excels "premiums" for miles per gallon

Results of Automotive Engineers' reports compiled by nationally-known firm of certified public accountants.

A SUNOCO DEALERSHIP MAY BE OPEN IN YOUR TERRITORY

Remember—Sunoco Dealers, on the average, pump twice as much gasoline as competitive dealers. Would you like to become a Sunoco Dealer? A Sunoco Dealership may be available in your community. Call our local office, or write us direct: Sun Oil Company, Philadelphia 3, Pa.



SUN OIL COMPANY • Philadelphia 3, Pa.

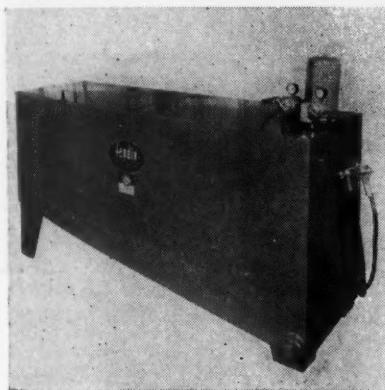
New Products Continued from Page 132

175 Parts Supplement

Neapco Prod's Inc.: Supplement A to the maker's chassis parts catalog completes and brings up to date all listings on passenger cars, king bolt and tie rod applications for light trucks, and coil springs. It also contains new kits, king bolt interchange and interchange from truck manufacturer's numbers.

176 Undercoating Tank

Nox-Rust Chemical Corp.: The automobile undercoating storage tank introduced by this company is said to provide a safe, trouble-free, method of handling undercoating. Use of the tank is said



to eliminate contamination of the undercoating, eliminate the handling and storage of drums, and prevent the loss of solvent vehicle thus maintaining the material at proper consistency.

177 Tubeless Tire Valve

A. Schrader's Son Div., Scovill Mfg. Co.: A standard clamp-in type replacement valve said to fit all wheels equipped with tubeless tires, is offered by this maker. Rubber washers are provided with each valve to permit attachment to rims with round or oval shaped rim holes. The company states that an airtight seal is formed between the valve and the rim by tightening the hex nut until the

upper round rubber washer is squeezed flush with the large metal washer beneath the hex nut.

178 Line Anchor

C & K Co., Inc.: Automobile bumper "Tie-Bolts" that are used to provide anchors for securing

bulky items to cars are available through this company. Made of tool steel the bolts are zinc-plated and are flush-mounted by replacing the standard bumper bolts. An 11/16 inch "eye" in the bolt head provides a ready anchor for a line.

179 Light Stand

Save Lamp Co.: A variable height stand lamp that has joints (Continued on page 136)



New Model "SM-3" — one of 80 different models and types of Jenny for your needs.

Get it with
HYPRESSURE
Jenny
Combination
STEAM CLEANER and
COOLING SYSTEM FLUSHER

If you really want new business—profitable business—you can get get it with Hypressure Jenny Combination. With this two-in-one unit, you can offer your customers the most thorough cooling system cleaning job known to modern science. You can clean motors, chassis, white side-wall tires; thaw frozen radiators; steam out tank trucks; and do scores of other customer jobs that will

bring you at least \$300 to \$500 more every month. In addition you will be able to keep your pits, lifts, driveways, tools and equipment spic and span for one-tenth the cost of any other method.

Get full facts about how Jenny can satisfy your hunger for new business; the aids we offer to help you get that business; and how you can pay as you earn.

Fill Out and Mail Coupon TODAY! No Obligation.

Without obligation, please send facts about Jenny, Time-Payment Plan, signs and other sales aids you offer to help us get more business.

Name _____ Title _____

Company _____

Address _____

City _____ State _____



HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. Box 95

Coraopolis, Pa.

New Products Continued from Page 135

that can be moved without making mechanical adjustment, has been marketed by this maker. The legs are steel; assembled with friction washers which allow varied adjustments for height or position. The reflector can be moved vertically and can be rotated 360 degrees. The standard lamp is 69 inches high with three

legs and holds a 300 watt bulb with the larger reflector.

180 Rust Remover

Flood Company: The product offered by this maker is a clear air drying oil that is said to remove and stop rust and corrosion

on an automobile. "Penetrol" is claimed to remove discolorations and encrustations, and leave an invisible protective film that effectively stops damage to metal. When used on chrome, it gets under and behind the rust, making removal easy, the maker states. On bodies, fenders, and all undersurfaces, it is said to be effective as a base for undercoating.

181 Battery Clamp

Hoggatt and Walls Co.: The "Snap-It" Battery Terminal Clamp is a new product manufactured by this firm. It's a terminal clamp that is claimed not to corrode or stick and may be taken off in a jiffy—"Snap-It" on, "Snap-It" off—without the use of any tools.

The clamp has been tested for some time and has proven satis-



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Exide Ultra Start

5

Featured in recent issues:

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- Do Storage Batteries Recharge Themselves?
- Emergency Car Starting Guide
- You vs. The Chain Stores
- How Much Does It Cost to Recharge a Battery?
- Wonder Battery Claims Can Be Answered
- How to Test Batteries in the Car
- How to Plan a Battery Sales Drive
- What to Do About Leaking Batteries
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Exide AUTOMOTIVE DIVISION, The Electric Storage Battery Co.

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factory, the maker states. The four castings are made of a brass alloy, high copper content, and the pins of monel metal, making it a non-corrosive unit. With a toggle lock feature which keeps pressure on the terminal post at all times, it has a lever action to disengage it.

In case of an emergency, it can be released by a pull cable from inside of the car.

182 Camber Tool

Horton Mfg. Co., Inc.: A ball joint camber tool has been marketed by this company. The device which operates with a Blackhawk Porto Power P76 Pump and R-263 Midget Ram is said to decrease camber in the negative direction after all shims are removed. It is further stated that the tool can remove excessive positive camber in minutes without removing the wheels.

(Continued on page 138)



It really takes "Muscle" to keep your car riding like new

Make your own "muscle test" soon. Just try to compress or extend a new, full-power shock absorber! That's the kind of "muscle" it takes to keep your car riding like new—to control the springs, stabilize sidesway, keep all four wheels on the road. When shocks lose that "muscle"—and they do wear out!—your car is free to buck and sway, it steers hard and tires wear faster. Why take the chance? Ask your repairman to check your shocks now. If they've leaked and gone "flabby", ask him to replace with genuine Briggs Ride Control . . . all-weather shocks with exclusive "Hydro-Muscle" power sealed in steel—for the ride of your life—for the life of your car!

THE BRIGGS SHOCK ABSORBER COMPANY • CLEVELAND, OHIO
Division of The Gabriel Company



BRIGGS Hydro-Muscle® RIDE CONTROL

in the
POST
April 9

April is Ride Control Month—*Profit Month* for the shop with a 12-shock assortment of Briggs Hydro-Muscle Ride Control. Powerful ad at left hits your customers in April 9 Saturday Evening POST. Be ready! Get your Briggs 1250 or 1254 assortment, get FREE tie-in display tools now.



EVERYTHING TO TIE IN—included with assortment: wire display rack, window banner, application wall chart, sales badges, inspection folders, ride control facts, selling pitch . . . all for the price of 12 shocks alone!

no wonder BRIGGS business
is BIG business!

How to pick hand tools that BEAT THE CLOCK

Here's why Open-Ends and Box-Types from the complete line of Blackhawk Hand Tools give you important extras that speed work and beat the clock on flat rate jobs!

Own Hexite Open-Ends with sizes MATCHED for automotive work.



Sizes you use most are **MATED**. You save time and cut your tool investment!



Stop Knuckle-Busting!
Get "Nut-Fit"
Box-types



Loose-fitting
tool rounds
the corners of nuts
Cleanly broached
Blackhawk tools
firmly grip sides of nuts



Compare a Blackhawk Hexite Open-End, for example, with an ordinary open-end. Note the reduction in time-killing, tiring weight and bulk! Yet super alloys give you far greater strength. It's that way throughout this complete line of hand tools. For all your requirements — it pays to buy Blackhawk tools. They're stocked by leading jobbers.

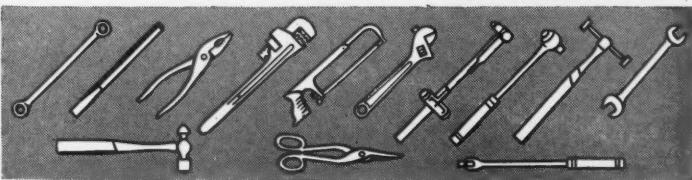


BLACKHAWK®

BLACKHAWK MFG. CO., Dept. W-635, Milwaukee 46, Wis.

NEW!

Write for free
88-page catalog
on this big
COMPLETE line
of hand tools



New Products . . .

Continued from Page 136

183

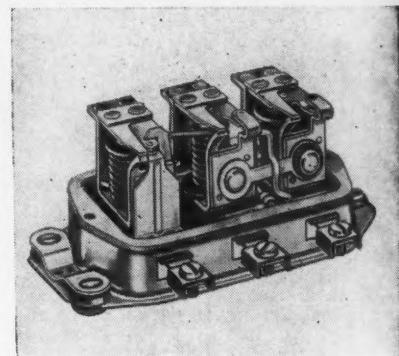
Idler Arm Take-Up Kit

Champ-Items, Inc.: According to this firm its idler arm take-up kit for most popular cars, provides the proper tension to eliminate idler arm looseness and noise. In addition, it is said to help keep toe-in setting accurate for easier steering. The assembly consists of an oil resisting rubber grease retainer, compression spring, thrust washer and cup.

184

Voltage Regulator

Ideal Corporation: This company offers its latest model voltage regulator. The new regulator is said to incorporate all latest original equipment design developments: Tungsten contact points paired with points of prec-



ious metals, temperature-compensated, leaf-type springs and a solid steel base. The line contains 10 regulators that are said to cover 98% of all six-volt applications.

185

Tire Cleaner

Holdun Mfg. Corp.: This company announces "White Magic," a non-caustic, non-acid liquid white-wall tire cleaner with "Aqua-Silicate" added. "White Magic" is said to be odorless and harmless to hands and painted surfaces. This liquid is sprayed or brushed on and dirt, grease, tars, oil and other road stains disappear. The product leaves no yellow or dull finishes, the maker claims.

(Continued on page 140)



"Advantages? Quaker State's new streamlined oil grading system has plenty!"

It's so easy to select the correct grade of motor oil when you sell Quaker State. There are just 3 basic grades—Light, Medium, and Heavy. And most important, Quaker State provides the finest possible lubrication and protection qualities. It lasts longer, too!

This streamlined grading system brings common sense to motor oil marketing. It's modern! It's exclusive with Quaker State. It means faster moving inventories and easier ordering. Customer satisfaction is assured because it is a simple matter for any service man to use the right oil for every engine need. And it's backed by high frequency advertising that helps build business for you. Ask your distributor for all the facts.

QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA.
Member Pennsylvania Grade Crude Oil Association

NEW QUAKER STATE OIL CLASSIFICATION

NOW—you need only 3 grades of Quaker State HD Oil for service MM, MS and DG.

LIGHT—SAE 10W, 20W, and 20... for cold weather service.

MEDIUM—SAE 20W-30... for warm weather service.

HEAVY—For use where SAE 40 and 50 grades are recommended.

AND—NEW SUPER BLEND SAE 10W-30
HD—for the newer, high-powered, high compression engines...for service MM, MS and DG.

New Products Continued from Page 138

186 Soldering Iron

Wen Products Inc.: A heavy duty electronic soldering gun is available from this firm. The "Quick Hot" is said to be ready for soldering or plastic cutting within seconds after the trigger is pressed. Its built-in spotlight permits good visibility and its sil-

ver plated tip is said to fit into the tightest corners. Designed to remain tinned indefinitely in normal usage the tip is said to be easily replaced.

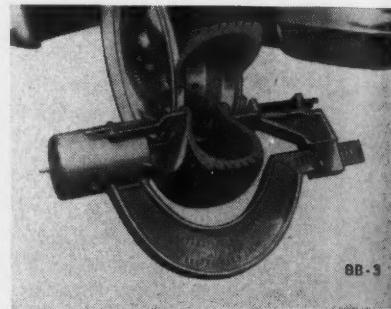
187 Welding Shields

Hobart Brothers Co.: Two new

molded fiber glass plastic head-shields for the head protection of welding operators have been marketed by this firm. Made of fiber glass reinforced plastic the shields are reported to offer the user lighter weight comfort with complete head protection from the welding arc and spatter. One type has the lens holder molded into the shield while the other has a lift front lens holder.

188 Bead Breaker

Automotive Equipment Mfg. Co.: The "Lee" air power bead breaker has been introduced by this firm. The breaker is said to be the only one that breaks both tire beads at the same time, with the wheel mounted on the car. It is actuated



BB-3

NO TUBELESS TIRE PROBLEMS

When You Use

RUGLYDE® with *Controlled-Friction*®

Why have leading tire manufacturers recommended only RuGLYDE for tubeless tire lubrication? . . . because only RuGLYDE has Controlled Friction! Gives proper lubrication so that tubeless tires will slip into place easily and seat properly, even on safety rim wheels, yet, after inflation, tires will stay in position—won't creep.

RuGLYDE also helps protect against damage due to scuffing the rim-seal ridges and base of beads . . . won't cause rust . . . or build up hard deposits in the sealing ridges that can cause air leaks.

Write today for your free illustrated folder that tells how and why RuGLYDE and the RUGLYDE Service Kit make tubeless tire mounting safer, easier.

To save time and RuGLYDE, use RuGLYDE in its custom-designed Service Kit, with special brush and applicator. See your supplier for details and money-saving introductory offer.



RuGLYDE is the registered trade mark of
AMERICAN GREASE STICK COMPANY
Muskegon, Michigan

by normal tire-inflating air pressure and is completely portable. The device handles all sizes and types of passenger car tires, including tubeless, white side walls and tires on safety rims, according to the manufacturer.

189 Plier-Cutter

Petersen Mfg. Co., Inc.: The curved jaws of the new vise-grip wrench provides 4-point contact on all size nuts, with jaws quickly adjusted by an end screw, the maker states. The tool's non-slip grip is gotten from double-lever action. Locking action is changed to plier (and ratchet) action by adjusting the end screw, it is stated. These wrenches are available in 7 inch and 10 inch models, with either straight or curved jaw.

Taxis in the U. S. cover more than 4.5 billion miles per year.



MORE FORD BUSINESS COMING UP

Many more Fords will be coming your way when your shop is identified by the Genuine Ford Parts Sign!

The reason's simple. Ford owners know from experience that a service station which takes the trouble to stock the right parts for their customers will take the trouble to give their cars the *right* kind of service.

What's more, the news gets around. You'll get lots of free word-of-mouth advertising from the many new customers your sign pulls in. Then, too, a hard-hitting national advertising campaign is constantly reminding Ford owners everywhere that Genuine Ford Parts are best for their cars.

Remember, too, the increasing number of Ford car and truck owners is an *ever-growing* market for your services. Genuine Ford Parts will help you get and keep your share of this business.

So mail in this coupon today! And we'll give you full information on how to get this business-boosting sign up over *your* shop in a hurry—at no cost to you.

PARTS AND SERVICE SALES DEPARTMENT

Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send me complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME _____

INDIVIDUAL'S NAME _____

ADDRESS _____

CITY _____ STATE _____

H

Clearing House Continued from Page 54

Distributor R.P.M. Vacuum inches Hg. Degree Adv.

200	0	0 degree
400	.38	3 to 4 deg.
1000	1.80	9½ to 10½ deg.
1500	3.05	12¼ to 13¾ deg.
2000	4.85	14¼ to 15¼ deg.

Advance given in degrees of camshaft rotation.

Lincoln? The one we have is the double diaphragm type?

J. L. Draeger
Draeger Motor Service
13150 Rexford St.
Blue Island, Ill.

BEFORE checking or adjusting calibration of the distributor the spark control cable assembly should be disconnected from the distributor, because any rubbing of the breaker plate against the cable may cause inaccurate calibration.

Calibrate the distributor to the following advance specification table below, with the listed vacuums applied to the primary diaphragm (diaphragm farthest from distributor housing). The calibration must be then spot checked at two or three calibration points with vacuum applied to the secondary diaphragm (diaphragm nearest distributor housing).

The above advance specifications are for distributor calibration only, and do not represent distributor advance under engine operating conditions. Recheck distributor calibration with spark control cable installed to insure proper operation of breaker plate assembly, without binding or sticking.

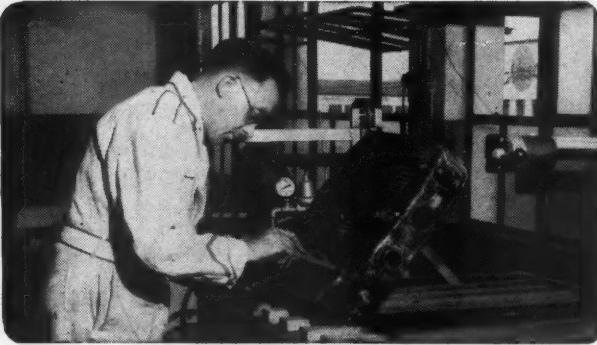
A mechanical control for the distributor advance is provided by means of a cable control between the carburetor throttle linkage and the distributor breaker plate. Mechanical spark advance begins with 30 degree opening of the carburetor primary throttle plates. The full 12 degree of mechanical spark advance is obtained when the carburetor primary throttle plates have opened 55 degrees.

\$11,000 With an INLAND RADIATOR DEPARTMENT

in Only 8 months—Only 1 man!

Says...

Jack Fagan of
Jack Fagan, Inc.
230 So. 7th St.
Phone 1073
Delavan,
Wisconsin
Population
4007



"Our return on our investment has been excellent. It paid for itself faster than any other equipment we have. As for space, we utilized a former car wash stall which everyone knows can't produce that many dollars. Inland properly trained our man and when I say properly I base that on the amazing small percentage of comebacks. And, Inland trained him at no extra charge."

Few automotive services offer such a potential for new and expanded business. Of the 60-million vehicles in the U.S., over 15-million require radiator service yearly. Inland-developed equipment allows operators to employ highly profitable production methods. And Inland, world's largest manufacturer of radiator repair equipment, offers the only complete package—equipment, training, merchandising.

Why Wait?

Start by investigating this now. The most it can cost you is a few minutes of your time. And the reward can be amazing.

Fill out coupon now for your free copy of "Blueprint For Profit." Gives details and prices of required equipment and experiences of other operators.

Inland Mfg. Co., 1108 Jackson St.
Omaha, Nebraska

P.S.—Mail Coupon Now. Take Advantage of New Models At Lowest Prices Ever!

Inland Manufacturing Co. Dept. MA-3
1108 Jackson St., Omaha 8, Nebraska

Please send free booklet "Blueprint for Profit."

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

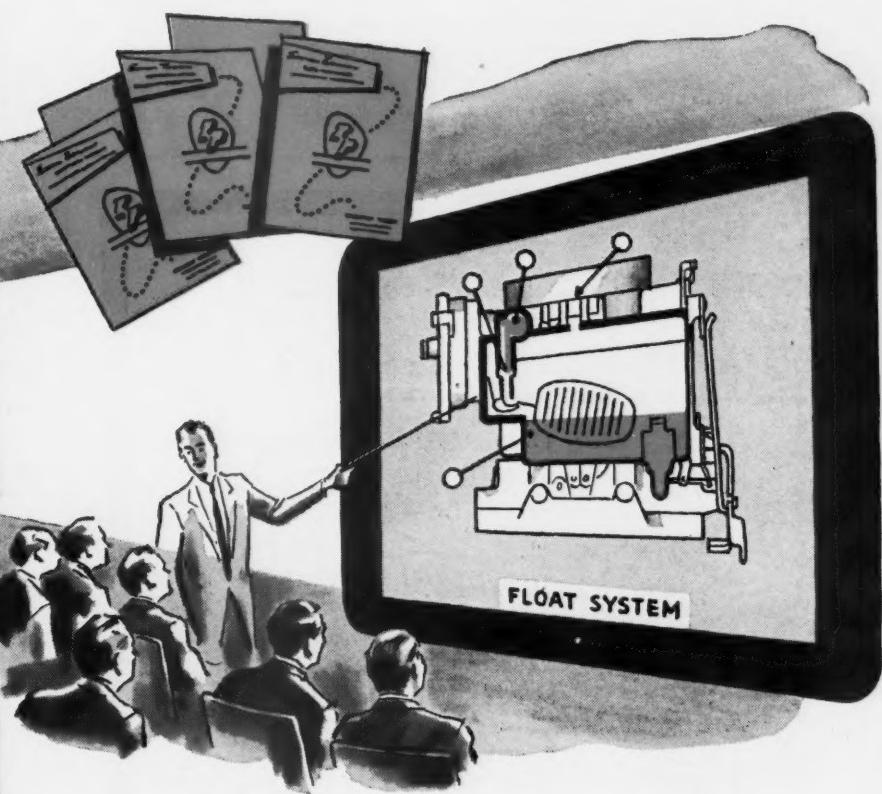
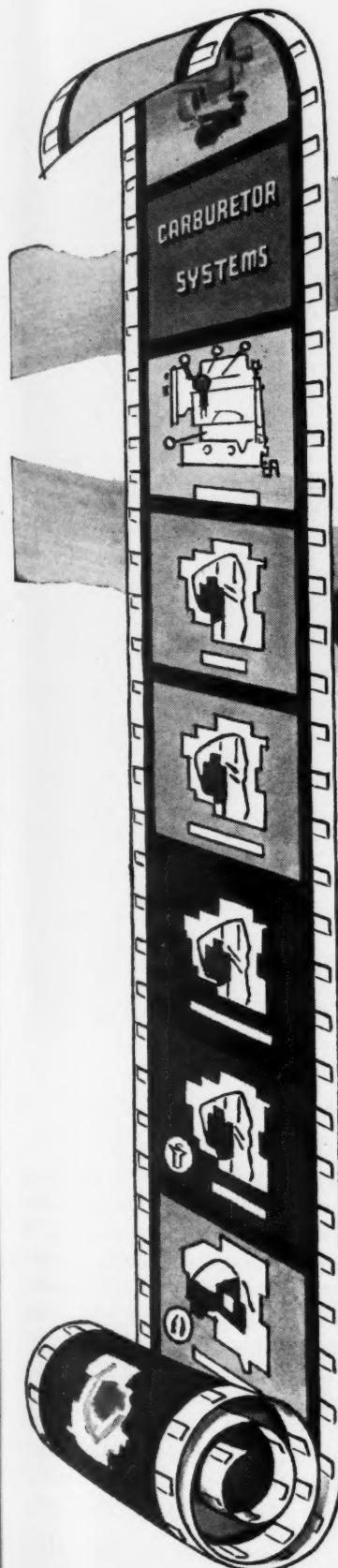
If Dealer, make of car sold _____

Are you now operating a radiator shop Yes No



BE A CARBURETOR SPECIALIST!

learn how to service Rochester Carburetors
the modern way—



Carburetor service is a science. Modern single, two and four-jet designs now demand skilled hands . . . complete understanding of carburetion principles as never before. To help give you the up-to-date carburetion education you need, special classes are now being offered in many ultra-modern General Motors Training Centers—under the supervision of factory-trained technicians. Write the United Motors Service distributor in your area for further information—today! Remember, the more you learn—the more you'll earn!

CARBURETORS BY **R**OCHESTER
PRODUCTS

ROCHESTER
PRODUCTS
DIVISION OF
GENERAL MOTORS
CORPORATION
ROCHESTER N.Y.

Service Suggestions

Seating Brushes Usually Stops Generator Noise

Generator brush noises can usually be eliminated in Pontiacs by seating the brushes with the generator on the car. While brush seating compound will frequently provide satisfactory seating, the use of a brush seating stone as

follows has been found to provide a more positive cure: 1. Start engine and run until it reaches normal operating temperature. (Brush noise may be more pronounced when generator is hot.)

2. Determine engine speed at which brush noise is loudest.

3. While running engine at speed where noise is loudest, very

carefully stone commutator until noise disappears.

4. In rare instances, stoning may not eliminate the noise. In this case, remove the armature from the generator, turn down the commutator and undercut the mica. When reassembling the generator, install new brushes.

Dampen Out Power Steering Pump Noise on Plymouth

Power steering pump noise or pulsation that may be transmitted to the frame can be damped out by insulating the power steering hoses from the frame. Wrap rubber tape, sponge or strips of rubber around the hose where it is held to the frame by the clips.

POWERFLEX CLUTCH PLATES
ARE FAMOUS FOR THEIR
PROVEN PERFORMANCE!

THAT'S RIGHT...SELF ALIGNING
HUB SPLINES, SPECIAL SPRING
SUPPORTS AND FLAT-TOP
CUSHIONS MAKE THEM THE
OUTSTANDING CLUTCH PLATES
ON THE MARKET!

Accurate

CLUTCH PLATES

Years of experience, combined with highest quality material makes the Accurate Powerflex® Clutch Plate outstanding in its field. Accurate's exclusive Flat-top Cushion design incorporates flat, parallel cushion surfaces that distribute wear evenly over the entire facing surface. Two other exclusive features include special protective spring supports and self-aligning hub splines. This, plus complete vehicle coverage, makes Powerflex® the most dependable clutch plate on the market. Ask your Jobber about Powerflex® Clutch Plates.

ACCURATE PARTS MANUFACTURING CO.
1600 S. Ashland Ave., Chicago 8, Illinois

Self-Aligned Hub Splines

Special Spring Supports

FLAT-TOP CUSHION

FACINGS

Flat-top Cushions

Use Cast Iron Tip Fuel Pump Push Rods in Cadillac

Servicemen are requested to use the cast iron tip fuel pump push rod, Part No. 3508895, for all future replacements on 1949 through 1953 Cadillac engines.

Use of the cast iron tip rod will materially reduce the possibility of camshaft failure due to eccentric wear. The soft rubbing action of the cast iron tip will also smooth out slight scuff marks that may have been present before the new push rod was installed.

The standard push rod, Part No. 1453483, should be used for all service replacements on 1954 series cars.

Rework Plunger Guide To Install Brake Cable

It may be found from time to time, when installing a new parking brake control cable in a 1953 Studebaker Hard-Top or 5-passenger coupe model, that the cable cannot be assembled in the plunger guide.

In order to make the installation in such cases, it will be necessary to file or grind a slot at the top of the plunger guide so that the tang on the ferrule of the cable assembly can be bent up into place.

(Continued on page 146)



At Minnesota Mining and Manufacturing Company (known as "3 M"), they say,

"He's America's No. 1 stick-up man!"

"Need a 'Scotch' brand tape for grafting trees? Wrapping a new automobile? Splicing a rug?

"We have 'em — and hundreds more," says "3 M" Executive Vice-President L. F. Weyand. "No wonder they call me the 'stick-up man.'"

"But there's one kind of sticky tape you won't find around here, and that's *red* tape. When our dealers or customers ask for a shipment in a hurry, we take them at their word.

"We call Air Express — and the shipment is delivered in a matter of hours!

"We know we can depend on Air Express. We prove it hundreds of times a year. What's more, we *save money* by using Air Express. A 25 lb. shipment from St. Paul to Miami, for example, costs \$13.65 door to door (one charge). That's 20¢ less than *any* other air carrier — and the service just can't be compared!"



Air Express

GETS THERE FIRST via U.S. Scheduled Airlines

CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY

Service Suggestions . . . Continued from Page 144

Replace Front Yoke to Stop Drive Line Thump

Universal joint clip yokes for 1950 through 1955, 61, 62 and 60S series Cadillac cars, are of a new design to assist in correcting a thumping noise in the drive line.

The counterbore in the spline end of the yoke has been elimi-

nated, which serves to lengthen the yoke splines. The longer splines furnish more contact area between the output shaft and the yoke, thus reducing the possibility of a change in the axial relationship between the output shaft and yoke when a change in engine or rear wheel torque occurs. When installing the new yoke to correct drive line

noise, it is essential that all sharp edges be removed from the output shaft splines.

The complete corrective procedure is as follows: 1. Remove propeller shaft. 2. Remove sharp edges from transmission output shaft splines, using a small stone. Also check new yoke and remove all sharp edges. 3. Coat yoke splines with E.P. 90 hypoid rear axle lubricant. 4. Install yoke with longer splines on propeller shaft. 5. Install propeller shaft.

MECHANIC FOR SALE

NEVER SICK—NEVER ON VACATION
ONE MONTH'S SALARY AND
HE'S YOURS FOR LIFE...

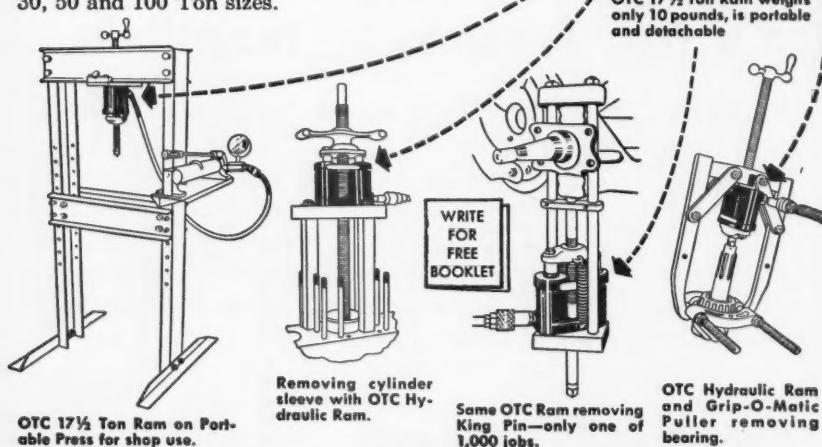
YOU GET ALL THIS AND MORE with an
HYDRAULIC PULLING SET



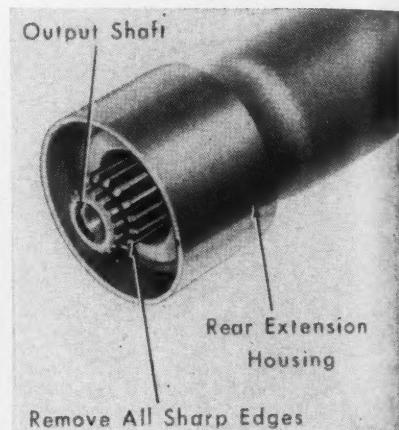
For a small amount—less than a month's salary—you can have a complete set of OTC Hydraulic Pulling Tools. It will do more than a man's work every day for life.

The famous Power-Twin Center Hole Ram may be used on a press or as a portable unit to push, pull, straighten, bend, press, spread—to pull or install bearings, sleeves, outer races, gears, pulleys, shafts, bushings, etc.

The 17½ Ton unit may be adapted to your present OTC pulling tools. Also available in 30, 50 and 100 Ton sizes.



OWATONNA TOOL COMPANY
321 CEDAR STREET • OWATONNA, MINNESOTA



The new yoke will be installed on 1955 cars in production as soon as a sufficient quantity becomes available. Early type yokes now in dealers' parts stock should be used on 1953 and earlier cars.

'55 Powerflite Linkage Adjustments Simplified

Throttle linkage adjustments have been simplified on 1955—P-26 and P-27—Plymouth Powerflites. All adjustments are now made in the engine compartment; however, the linkage should always be checked for possible binding by checking at the throttle lever on the transmission to make sure the lever freely returns to its stop.

When throttle linkage is properly adjusted, pressing the accelerator pedal causes the simultaneous increase of engine speed and throttle pressure. To obtain this relationship throttle pressure as well as throttle linkage should be checked.

P-27 throttle linkage adjustment

Throttle pressure is checked at
(Continued on page 148)

Instant oil control + a full chrome ring set

THE MONEY-MAKING REASONS FOR YOU TO INSTALL

the reasons why...

1. Pre-seated for instant oil control

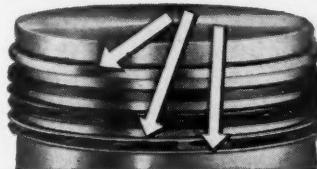
Pre-seated narrow land contact surface of Krome-Oil top groove compression ring



Pre-seating means early break-in, no customer complaints. It is a factory-applied lapping process for the top groove compression ring equivalent to many hundreds of miles of *actual* engine operation. Sell and install chrome, with its long-wearing qualities and instant break-in features. It delivers premium performance all the way.

2. Full chrome ring set

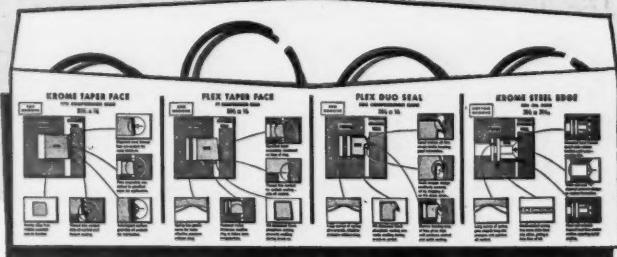
Look for chrome here ... to install a full chrome ring set



When you install chrome, be sure you're selling a *full chrome* ring set. Check for chrome on the top groove compression ring, on the side rails of the oil ring. Install chrome confidently because Krome-Oil is pre-seated. Krome-Oil seats instantly, doesn't scuff, and pays off in longer engine life.

AMERICAN HAMMERED Pre-seated Krome-Oil PISTON RING SETS

3. All-in-one ring envelope



All-in-one ring envelope contains all the rings for one piston. They're packaged in this envelope in the order of installation. This prevents mix-ups, saves you or your mechanic time. A real time-saver in the shop.

Install Krome-Oil, the chrome ring set with all the answers



American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street • Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement
Piston Rings. A Division of Sealed Power Corporation

Remember profit-packed American Hammered Power-Plus Service—
Koetherizing • GI-60 Groove Insert • Dry Film Lubricant

Service Suggestions . . . Continued from Page 146

idle speed in drive range (there is no pressure in neutral). Pressure should be 13-15 psi. Use a throttle pressure gage to check, and adjust if necessary.

Throttle linkage adjustment is made by loosening the clamp nut on the throttle control rod above the engine (make certain the linkage is free from binding). Start

the engine and when warmed up, set idle speed at 450-500 rpm using a tachometer.

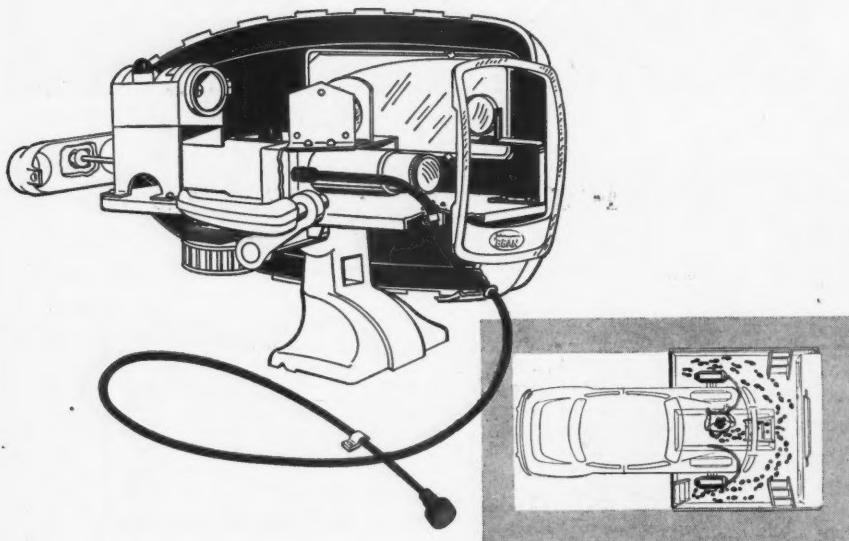
Make certain the carburetor is off the fast-idle cam. Slide the rear part of the throttle rod toward the rear of the car to take up all slack and tighten the clamp nut.

P-26 throttle linkage adjustment

Procedure for adjusting throttle linkage of P-26 models is similar to the P-27 except for an additional adjustment at the carburetor throttle lever rod. First loosen the vertical clamp rod, then adjust the carburetor throttle lever rod to provide 5 7/16 inches distance between the anchor points of the throttle return spring. Then with the engine idling, take up slack at the vertical rod and tighten the clamp nut.

John
BEAN

New Remote Visualiner Control



SAVES STEPS

... increases profit

Now — for the first time — you can check and correct wheel run-out, caster, camber and toe — without coming out from under the car.

Now — costly back and forth steps can be eliminated completely, resulting in increased shop efficiency and greater profit.

The Remote Control unit — a JOHN BEAN exclusive — is standard on all 1955 Visualiners. For Visualiners now in use, Remote Control units are available in easy-to-install kit form.

JOHN BEAN DIVISION
FOOD MACHINERY AND
CHEMICAL CORPORATION
Lansing 4, Michigan



WHEEL ALIGNERS • WHEEL BALANCERS
TIRE DE-SKIDDERS • STEAM CLEANERS
CAR WASHERS • HEADLIGHT TESTERS
ACCESSORIES and ALLIED TOOLS

"When It Comes to Aligning - Use Your BEAN"

JOHN BEAN DIVISION, Lansing 4, Michigan

- Please send me complete information on the 1955 Visualiner.
 Please send me information on Remote Control unit installation.

NAME _____

ADDRESS _____

CITY _____ STATE _____

Watch for Extra Long Cap Screws on Stude. Engine

THE timing gear cover for the Studebaker Champion is attached with eight cap screws and four bolts and nuts. Four of the cap screws go into the cylinder block along the top of the timing gear cover, and the remaining four go into the oil pan filler block at the bottom of the cover. The factory has, in the past, specified $\frac{7}{8}$ -inch long screws for all eight of these locations.

It has now been determined that the screws for the four holes at the top of the cover may be too long, since it is possible for the screws to bottom against the water jacket side of the cylinder bore casting. It is desirable to continue to use the long screws for the bottom holes because of the amount of gasket that must be taken up during assembly.

To prevent bottoming, four of the longer screws were cancelled and four screws, $\frac{1}{8}$ -inch shorter, were released. The four short screws, Part No. 1-0512, are to be used at the top of the cover so that the screws will not bottom before the cover is securely sealed, and the four of Part No. 1-0514 are to be used at the bottom of the cover.

Oversize Lining Not Recommended by L-M

Oversize brake lining on 1949-50-51 Lincolns and Mercurys is not recommended. The reason for this is that the brake drum cannot

(Continued on page 150)

money makin'est wrench set in $\frac{1}{2}$ " drive!

*** Snap-on**

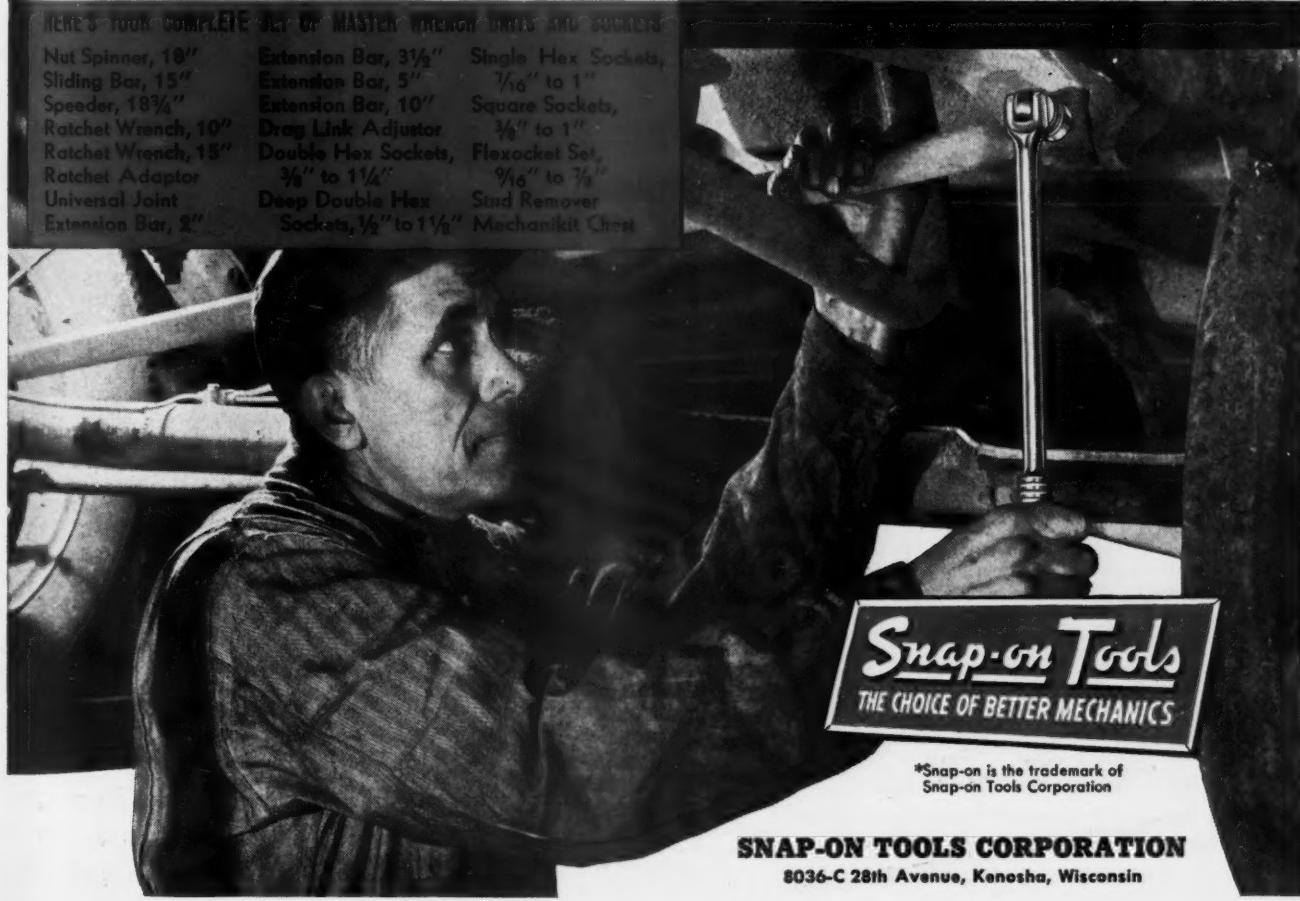
MASTER GENERAL SET



SET 368A-M-B



It's the basic wrench set with thousands of top mechanics... men who know you can't hit highest earnings without *complete* kits of the *right* tools! With this set you've got at your finger tips every combination of handle, adaptor, extension and socket to speed *any* job in the range of $\frac{1}{2}$ " drive. On job after job you'll continue to get the pay-off of superior speed, flexibility, durability! ASK YOUR SNAP-ON MAN! He'll gladly show you this fine set, and if you like, help arrange a methodical replacement of worn or misfit tools with "Masters." Free, 104-page catalog of the complete Snap-on line—from your Snap-on Man—or write the factory direct.



Snap-on Tools

THE CHOICE OF BETTER MECHANICS

***Snap-on is the trademark of
Snap-on Tools Corporation**

SNAP-ON TOOLS CORPORATION
8036-C 28th Avenue, Kenosha, Wisconsin

Service Suggestions . . . Continued from Page 148

be ground 12.060-inch diameter, which would be required to accommodate the .030-inch oversize lining and still be within safety requirements.

The maximum allowable diameter for grinding 1949-50-51 Lincoln-Mercury brake drums and still meet safety requirements is 12.030 inch. This oversize diam-

eter can be obtained with standard lining through standard brake adjustment

Oil Cooler Should Be Removed and Checked

When it becomes necessary to repair or replace a Chrysler torque

converter or components for any reason, the oil cooler should also be removed and checked for leakage.

It has been determined that it is possible for the small radiator within the oil cooler to develop leaks, allowing water to enter the torque converter oil system or converter oil to enter the engine cooling system.

When water enters the converter oil and the car is operated under adverse conditions such as pulling steep grades, extended traffic operation, and so on, the heat developed by the converter raises the oil temperature sufficiently to boil the water in the system. The resulting steam then forces oil out of the converter and reservoir. If the oil loss is not detected in time, the converter and components may then fail.

Converter oil leaking into the cooling system will result in impaired engine cooling and deterioration of the water hoses.

Note: It is also advisable to make the following tests on the oil cooler when servicing Power-Flite transmission equipped cars where time, mileage and condition of components are such that an inspection is indicated.

To test the cooler:

1. Remove cooler from engine.
2. Attach a bearing wear detector to one oil line fitting and block off other opening with a $\frac{1}{8}$ " pipe plug. Note: Air alone may be used in the bearing wear detector. Do not charge tank with more than ten pounds of air.
3. Open valve on line to cooler and submerge cooler in water. Air bubbles or oil coming from water inlet or outlet passages of cooler indicate a defective cooler radiator and the unit must be replaced.

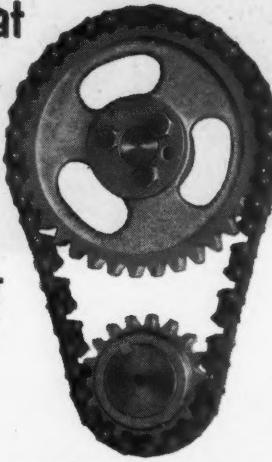
Dealers who have established this procedure for checking the cooler find that the result is fewer converter repairs and come-backs on repairs and replacements.

5 Degree Advance Best Setting for Pontiac Timing

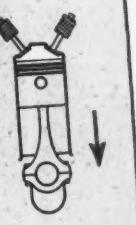
In the past there has been a
(Continued on page 154)

WHY you should replace timing chain and sprockets at every engine overhaul!

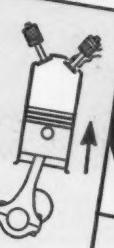
LOOK HOW A SLIGHT TIMING LAG AFFECTS CAR PERFORMANCE



1 FIRE
LAG IN PISTON FIRING: Carbon, overheating, plug fouling, scored cylinders, fuel waste.



2 EXHAUST
LAG IN EXHAUST VALVE OPENING: Burning of exhaust valves, loss of compression.



3 INTAKE
LAG IN INTAKE OPENING: Low fuel charge, power loss, vacuum that pulls oil past rings.



4 COMPRESSION
LAG IN INTAKE CLOSING: Fuel and pressure backfire through carburetor, damage pistons and valves.



WHEN YOU REPLACE TIMING CHAIN AND SPROCKETS BE SURE TO USE "LINK-BELT" . . . THE WORLD'S FINEST ORIGINAL EQUIPMENT LINE

AT every overhaul — while the engine is down — that's the convenient time to replace timing chain and sprockets. You protect your service reputation . . . assure positive valve timing and high engine efficiency. Use Link-Belt, the timing chain having segmental bushings with anti-whip, anti-back-bend features. Carried by leading jobbers.

LINK-BELT
TIMING CHAINS AND SPROCKETS

LINK-BELT COMPANY, 220 South Belmont, Indianapolis 6, Ind. Warehouses in Principal Trading Areas.
13,747

THIS IS MÖPAR CAR-CARE MONTH!



NOW RESTORE
"NEW-CAR" INTERIOR
BEAUTY EASILY—
FOR ONLY \$2.15*

Amazing new MOPAR KAR KLEEN
removes stains, spots,
and dirt like magic!



Now you can enjoy "new-car" riding pleasure and pride continuously! New MoPar KAR KLEEN brings back the beauty of your car's interior quickly, easily, magically. It removes the most stubborn stains, spots, or dirt from upholstery, seat covers, headliner, visor panels, etc.—whether the interior materials are cloth, vinyl, or leather! Everything can be cleaned and beautified by MoPar KAR KLEEN. One bottle provides more than enough—and you need only a small brush or sponge to do the job!



Only \$3.65*

MoPar Re-Glyde will
sparkle up your car's ap-
pearance by restoring that
new look to rubber car-
mats, tires, belts, and rubber ac-
cessories. Re-GLYDE will
do the job with less effort
and at lower cost.



Only \$3.70*

MoPar Cleaner and Auto
Polish combine to main-
tain gleaming exterior
brass and body clean exter-
ior with MoPar Cleaner
and then beautify it in a flash
with today's finest Auto Polish!



Only \$3.50*

MoPar Radiator Rust
Resistor protects your
cooling system against
damaging rust and scale.
Drops in a protective coating
throughout the cooling
system. Recommended for
any make of car.



Only \$1.00*

MoPar Chrome Polish
will restore brilliance and
luster to the chrome parts
of your car! Removes rust,
corrosion, and tarnish, and
leaves a durable film which
protects finish!



MoPar Interior-Seal Wax
Cream provides brilliant,
durable protection for the
finishes of old or new cars.

Only \$1.25*



Only \$1.00*

MoPar Paint Applicator
touches up scratches
and scuff marks . . . for cars,
refrigerators, and more!
Stops rust and water
starts! Over 100 colors in
clashing whites!

*Factory Surch. Price or Postage

MOPAR is the identifying name of thousands of parts and accessories designed and built especially for your Plymouth, Dodge, DeSoto or Chrysler dealer and from better repair shops everywhere.

PARTS DIVISION • CHRYSLER CORPORATION
DETROIT 31, MICHIGAN

MÖPAR

This full-page ad
will appear in the
March 12th issue
of The Saturday
Evening Post, and
in the April issue
of Popular Science,
Popular Mechanics,
and Mechanix
Illustrated.

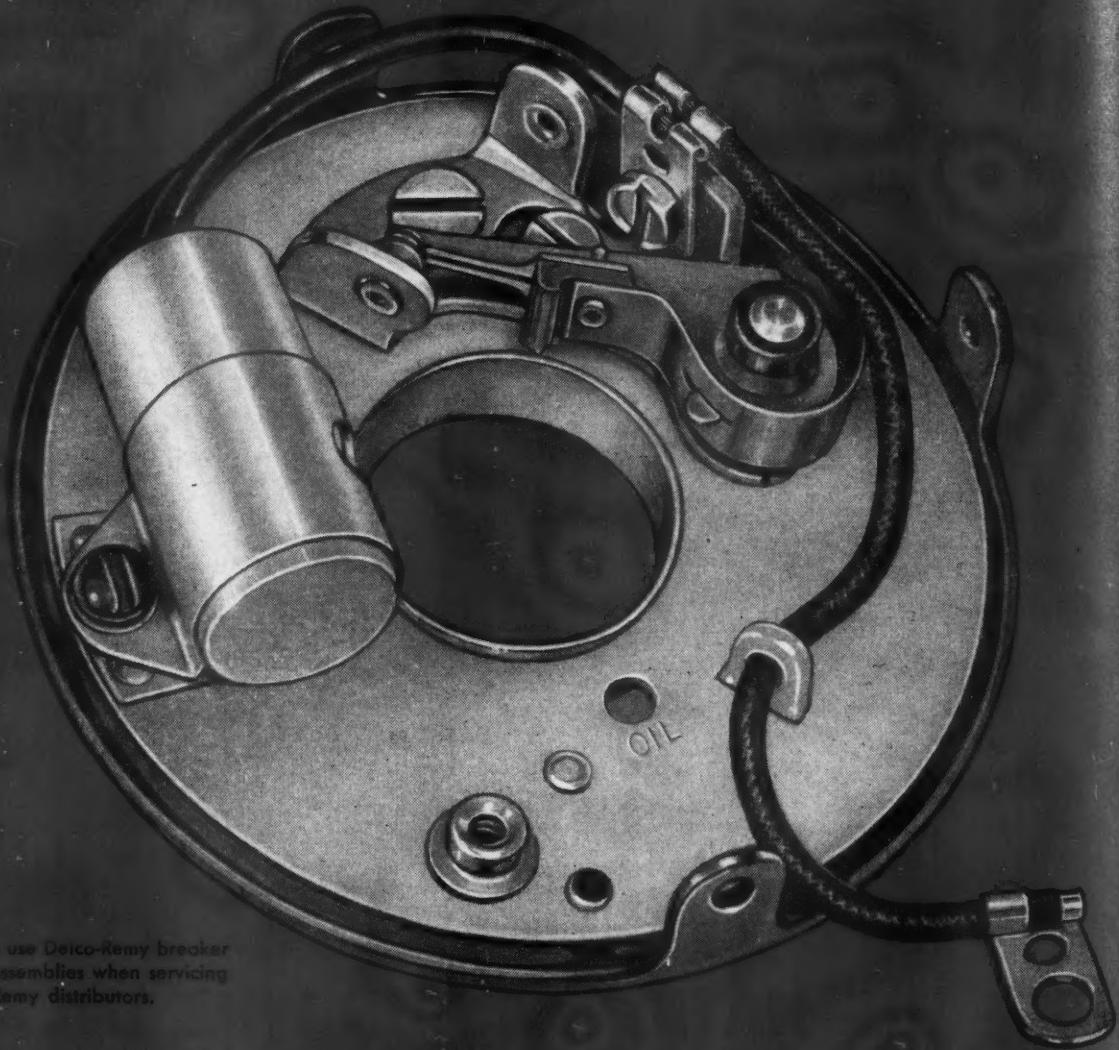
THESE BIG NATIONAL ADS WILL INCREASE YOUR SALES OF MOPAR PRODUCTS!

Powerful national advertising, reaching a total audience of 30 million people, will proclaim March and April as MoPar's car-care months . . . will sell the MoPar products needed to beautify cars inside and out. Your customers will be among the millions reached by this promotion. Be sure to have a full supply of all MoPar car-care materials in stock so you can give your customers what they will be asking for. Contact your nearby Chrysler Corporation dealer or MoPar parts wholesaler today.

MÖPAR

PARTS DIVISION • CHRYSLER CORPORATION • DETROIT 31, MICHIGAN

Top Performance



Always use Delco-Remy breaker plate assemblies when servicing Delco-Remy distributors.

A GENERAL MOTORS PRODUCT



A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

Makes 'Em Top Sellers

DELCO-REMY COMPLETE BREAKER PLATES

MAKE REPLACEMENT EASIER, SURER

There are plenty of customer advantages to help you sell Delco-Remy pre-adjusted, center-bearing type breaker plate assemblies . . . extra advantages, too, for the man who does the installing. Fact is, all he does is put the plate in the distributor! Contact points are already aligned, spring tension already adjusted, condenser mounted, and clearances already checked. Looking at it from the mechanic's viewpoint, Delco-Remy's complete replacement breaker plate assembly is a real time and work saver when servicing Delco-Remy distributors.

And here are the mechanical advantages the Delco-Remy complete breaker assembly offers the customer:

- Scientifically spaced support bearings provide maximum stability under all operating conditions.
- Smooth motion of movable plate on molded anti-friction bearings allows quick, accurate response to sudden engine-speed changes.
- Built-in oil-retaining felt provides dependable, long-term lubrication.
- Chemically treated support plate increases service life by resisting surface corrosion and "grooving."

Breaker plate assembly packages are available to cover the original equipment replacement needs of many 6- and 8-cylinder late-model passenger cars from 1949 through 1953.

See your United Motors catalogs for complete description and application data. Then order a stock of Delco-Remy breaker plate assemblies from your United Motors distributor.

COPYRIGHT 1955 DELCO-REMY DIVISION, GENERAL MOTORS CORPORATION



DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA

Chilton's MOTOR AGE, MARCH, 1955

1955

Service Suggestions . . . Continued from Page 150

practice of setting ignition timing as high as 10 degrees BTDC on Pontiacs. This should be discouraged. It is true that some slight gain can be shown in road horsepower on service type chassis dynamometers, however, when timing acceleration on the road, no gain in performance can be shown due to the 10 degree advance as

against the 5 degree advance recommended.

The distributor advance characteristics for the engine were established by carefully controlled laboratory dynamometer tests to provide maximum torque without detonation at the various engine speeds.

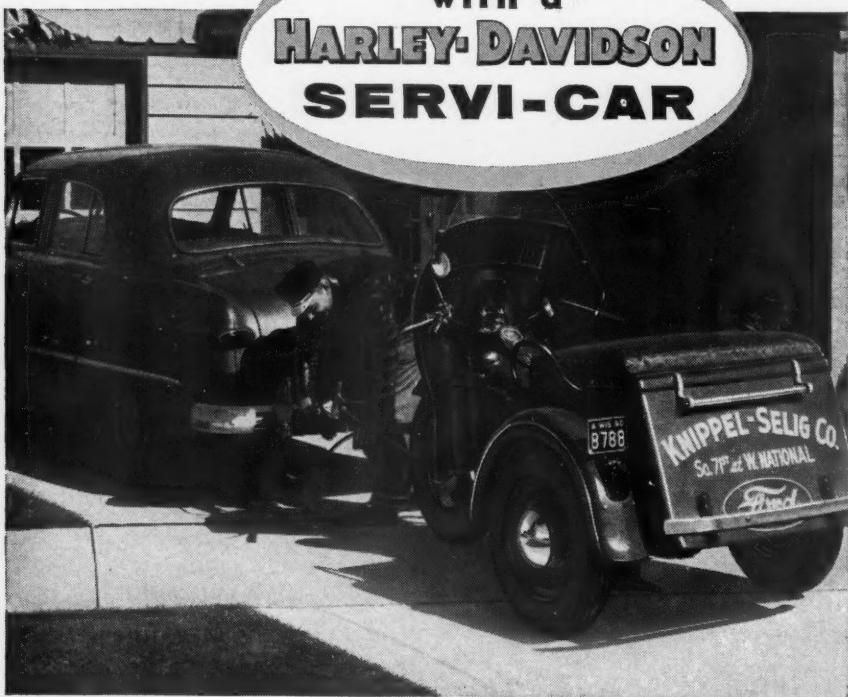
A new engine with clean com-

bustion chambers may operate at 10 degree advance without detonation but at some time accumulations in the combustion chamber will probably cause detonation with such a setting. In connection with the above statements recommending only 5 degree advance, it should be pointed out that timing should be done with a timing light with the engine running at 400 RPM (460 RPM with Synchro-Mesh transmission).

The 1955 distributor centrifugal advance starts at 500 RPM. It is, therefore, important that idle speed be set with an electric tachometer when making timing adjustments. After timing is adjusted the distributor hold-clamp bolt should be tightened to 20 lb. ft. of torque.

How to turn IDLE shop equipment INTO SUPER PROFIT-BUILDERS!

with a
HARLEY-DAVIDSON
SERVI-CAR



Users tell us . . . add a Servi-Car to your "staff" and you'll double your service territory. That means more new customers to keep costly repair and service equipment profitably busy all day long. What's more . . . fast pick-up and delivery service builds customer good-will, helps give your shop a reputation for speedy, on-time work. Ask your Harley-Davidson Dealer for your FREE copy of booklet: "It Pays to Give Service." Or write HARLEY-DAVIDSON MOTOR Co., Dept. MA, Milwaukee 1, Wisconsin.

Here's how the SERVI-CAR helps you to bigger profits!

Keeps business rolling in all year 'round. • Builds good will with convenient service. • Gets jobs in and out of the shop quickly. • Provides continuous advertising wherever it goes. • Saves time on errands for parts and accessories. • Keeps costly shop and service equipment busy. • Gives safe, economical easy-to-operate service.

SERVI-CAR SERVICE SELLS MORE SERVICE

New L-M Stabilizer Bar Replaces Current Model

To provide sufficient clearance between the Stabilizer Bar and the tire on a full right or left turn, when 8:20 tires are used, Lincoln-Mercury has released a new Stabilizer Bar, part number LA-5482-C, which replaces the LA-5482-A currently specified.

Raising Upshift and Maximum Kickdown Speeds

On 1955 Commander and President Studebaker models with automatic drive, the upshift from drive intermediate to drive direct on kickdown should occur between 66 and 70 mph. You should be able to kickdown from drive direct to drive intermediate between 60 and 64 mph; this is called "maximum kickdown speed."

If an owner complains about a low upshift speed (approx. 60 mph) from drive intermediate to drive direct at full kickdown or a low maximum kickdown speed from drive direct to drive intermediate (approx. 48 mph), check the accelerator-to-governor linkage adjustment and inspect the governor spline shaft and governor valve for burrs or roughness,

(Continued on page 158)

★ ONE OF THE 1955 PARADE OF NEW "OK" PRODUCTS ★



More lacquer solids on
the car in fewer passes
with new double-strength

OPEX "POTENT"

Hot spray benefits — with cold spray methods!

That's what OPEX "POTENT"—the new concentrated lacquer solvent blend—accomplishes, in effect, on your lacquer jobs! HALF the usual amount of thinner (75% instead of 100-150%) produces the same thinning effect . . . puts more film-forming solids on the car with every pass . . . produces richer gloss and depth . . . more uniform dispersion for opalescents . . . better color matching . . . with fewer coats!

"POTENT" also gives you "potent" help on two other problems. Its fast action greatly reduces sand-scratch swelling in old lacquer undercoats. Its combination of ingredients also eliminates need for retarders for control of blushing.

Try this new time and material saver on your next job. Call your OK automotive jobber and ask for "POTENT"—"It's magic"! The Sherwin-Williams Co., Automotive Division, Cleveland 1, Ohio.

Ask about all these 5 new star performers!

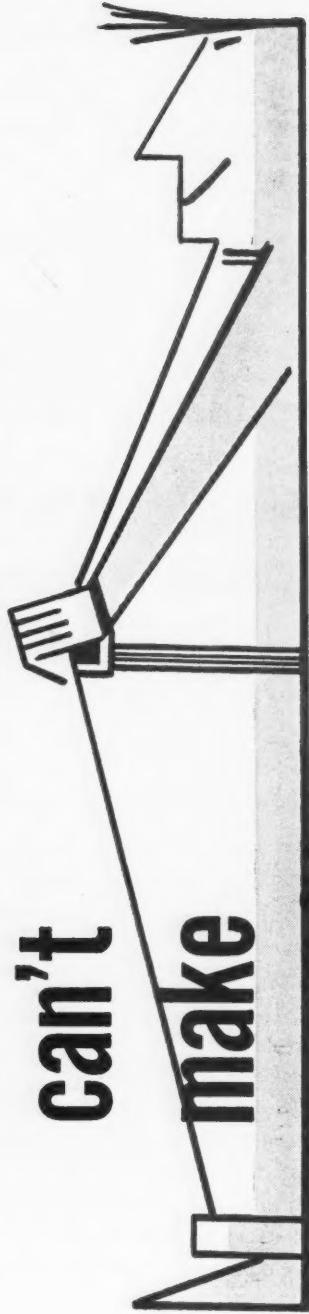
- ★ NEW OPEX "SPEED-FILL"® PRIMER-SURFACER
- ★ NEW KEM® RED OXIDE PRIMER
- ★ NEW KEM "FLO-GLO"® REDUCER
- ★ NEW OPEX "POTENT"® CONCENTRATE
- ★ NEW OPEX "SPOT-SOLV"® LACQUER REMOVER *Trade-Mark

SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES



You

can't
make
a profit



"Laying down" on the job!

MECHANICS ARE . . .

"FAST ON THEIR FEET"

UNDER A . . .

GLOBE "FRAME-KONTACT" HOIST

When your working space has only two usable dimensions—length and width—it costs you money! Mechanics can't do their best work when they crawl under cars . . . work in a cramped, uncomfortable position . . . and slide in and out for tools and other shop equipment.

OTHER "FRAME-KONTACT" BENEFITS:

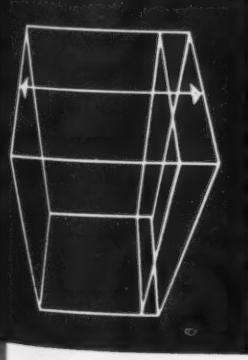
LOW COST ONE-PIT INSTALLATION

ACCOMMODATES ALL CARS

ONE VALVE CONTROL

BETTER LUBE JOBS BECAUSE WEAR POINTS ARE
FULLY PENETRATED BY LUBRICANT

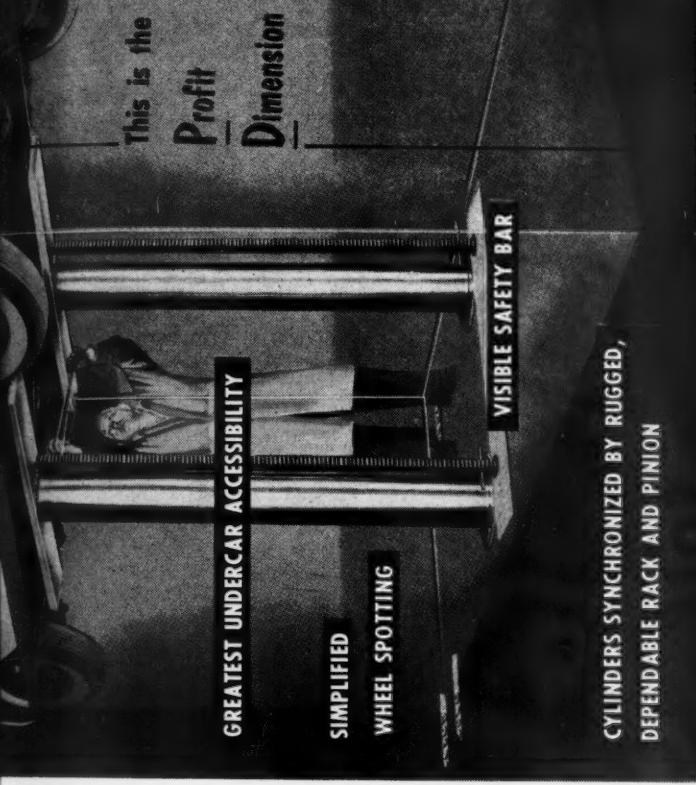
a cramped, uncomfortable position...
for tools and other shop equipment.



But when you install a Globe "Frame-Kontact" Hoist, you add the Profit Dimension of unobstructed height along with greatest accessibility to entire undercar.

Time studies prove that mechanics increase the efficiency of their work by 50 per cent and more when they work upright under this revolutionary, time-saving Hoist. And 75% of all shop jobs are handled faster, better on this Hoist than any other way. Every underside part is within easy reach and all tools can be kept handy for immediate use.

Now get the complete facts on this profit-making "Frame-Kontact" Hoist by contacting your local Globe distributor. Or write to us direct. Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Penna.



FLAT CONTACTING MEMBERS PERMIT CROSS TRAVEL AND PARKING WHEN NOT IN USE

"Frame-Kontact" HOISTS

INVENTED, PATENTED AND
FIRST MANUFACTURED BY GLOBE

Trade Mark Reg. U.S. Pat. Off. Globe "Frame-Kontact" Hoists are made under one or more of the following U.S. Patents: 2458986—2593630—2593635—2612344—2612355—2654443. Other U.S. & Foreign Patents Pending.



*FRAME KONTACT HOISTS
SINGLE POST



FREE WHEEL TYPE
AUTOMOTIVE
TWO POST



ROLL-ON TYPE
AUTOMOTIVE
TWO POST



FOUR POST ELECTRIC
AUTOMOTIVE



WHEEL DOLLY
TRANSMISSION DOLLY

WORLD'S MOST COMPLETE LINE OF AUTOMOTIVE AND HEAVY-DUTY TRUCK HOISTS

Service Suggestions . . . Continued from Page 154

smoothing up the parts as necessary.

Noisy Harmonic Balancers Sound Like Valve Lifters

In many cases extensive diagnosis work has been done on engines to find the cause of a click-

ing noise which can be heard at regular intervals while the engine is idling. Work is often started on the lifters as the source of the noise.

When such a clicking is heard, it is often the result of loose rivets in the harmonic balancer. These are found on standard steering equipped Pontiacs. This

is very easily determined by listening out in front of the radiator grille. It can be further isolated by removing the fan belt.

A satisfactory remedy for this condition can be obtained by brazing at the ends of the rivets where they project through the holes in the pulley. The brazing can be accomplished without harm to the remainder of the harmonic balancer by placing the assembly in a shallow pan with water up to about $\frac{3}{4}$ of an inch of the surface of the pulley. Welding should not be used because it does not prove satisfactory.

New Towing Instructions On Hydra-Matic Pontiacs

The only procedures now recommended for towing of Hydra-Matic equipped cars are to disconnect the propeller shaft or tow car with rear wheels raised off the ground. When towing Hydra-Matic equipped cars with the propeller shaft disconnected, the tow car operator should be cautioned to make certain that oil does not leak from rear bearing retainer.

This information supersedes all previously released Hydra-Matic towing instructions including those in the 1955 "Hydra-Matic Shop Manual" and the 1955 "Pontiac Owner's Guide."

Reworking Rocker Arm Stud Installer Tool

To replace rocker arm studs in 1955 Chevrolet V-8 engines, it will be necessary to rework the rocker arm stud installer tool, No. J-5801, to seat the studs properly in the cylinder head. This tool was originally designed to locate the top end of the stud 1-27/32 inches above the top surface of the head at the stud hole.

Due to a design change the stud must now be seated in the head to locate the top end of the stud 1 $\frac{3}{4}$ inches above the head.

Tool J-5801 may be reworked to effect proper installation by grinding or filing 3/32 inches off the bottom end of the tool.

(Continued on page 162)

7 out of 10 cars on the road have speedometer trouble—



How many times have you turned down speedometer repair jobs because you couldn't handle them? Probably plenty of times, because 7 out of 10 cars need speedometer repairs. And now with this special selection of Stewart-Warner speedometer inner cores you can fix 'em fast!

Needle fluctuation, core rattle, noise, etc., almost all of these common speedometer troubles are due to a worn out, kinked or dry inner core. And now, you simply replace

them from this assortment—no special tools needed—and make a quick sale—a nice profit!

54% profit! That's what you make on this assortment, plus the installation charges! So, order now from your Stewart-Warner jobber. Start cashing in on this big, easy-to-sell market!



STEWART-WARNER

Instrument Division

Dept. FF-35, 1840 Diversey Parkway, Chicago 14, Ill.

NOW

TOLEDO STEEL presents a new
shock absorber for modern driving comfort!

WITH BIG NEW
SELLING ADVANTAGES
FOR YOU . . .



SKY-RIDE
Airplane Type
SHOCK ABSORBERS

Here's the news you've been waiting for! It's the news about SKY-RIDE . . . Toledo Steel's all-new shock absorber line. SKY-RIDE Shocks are now available as part of the famous Toledo Steel engine and chassis parts line . . . the line preferred by experienced repairmen for over 48 years.

New, patented features make SKY-RIDE the ideal shock for modern driving. What's more, these same features give you selling advantages that no other line can offer. Ask your Toledo Steel Jobber . . . he'll explain how you can capitalize on the exclusive features of the new SKY-RIDE line. Call him today, or write, phone or wire Toledo Steel Products Co., 6402 Cedar Ave., Cleveland 3, Ohio.



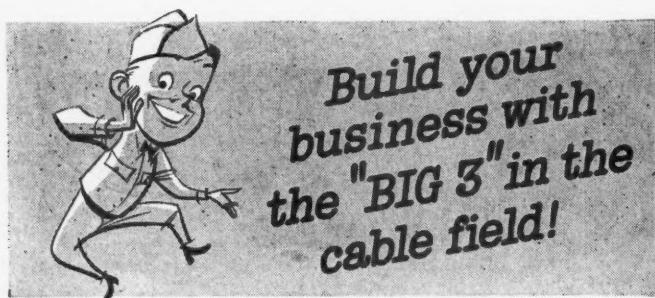
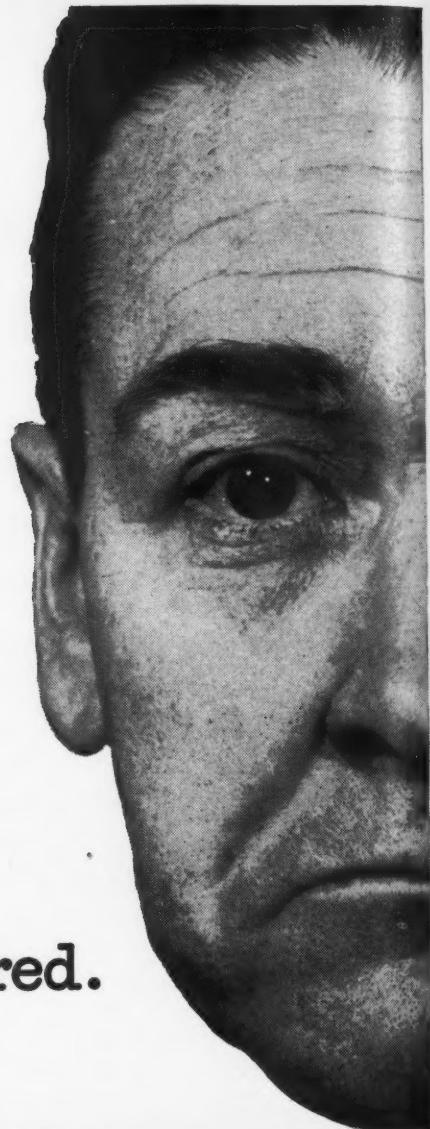
ANCIENT SYMBOL OF PERFECTION

TOLEDO STEEL
PRODUCTS COMPANY

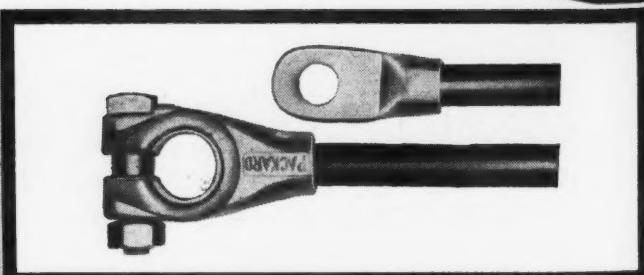
DIVISION OF THOMPSON PRODUCTS, INC.



"Slow-moving inventory"
plagued Harry Hyrd
Until he found out
what the buyers preferred.



Build your
business with
the "BIG 3" in the
cable field!



Packard cable is the choice of the automotive industry for original equipment—far and away the leader. It's preferred by repair shops and vehicle owners because it lasts longer, gives better service. It's preferred by jobbers and dealers, too, for its profit-making quick turnover. So, if you're plagued with cable inventories, stock Packard—the preferred cable.

PACKARD BATTERY CABLE—Packard battery cables are used as original equipment on more cars, trucks, buses and tractors than cables of any other make. Packard battery cables are full size, full weight . . . are available with LEADALLOY terminals or leaded brass terminals. Both types are packaged in individual cartons—both deliver top performance—both have acceptance, everywhere.

A GENERAL MOTORS PRODUCT



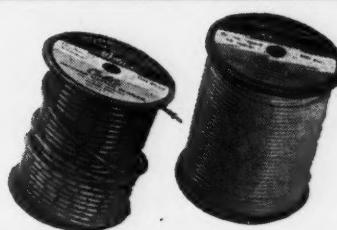
A UNITED MOTORS LINE



DISTRIBUTED BY WHOLESALERS EVERYWHERE



Now he's selling
as fast as he's able
Because he is
stocking Packard Cable.



PACKARD IGNITION CABLE—Packard High-Tension Cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard Television-Radio Suppressor Ignition Cable is recommended wherever ignition interferes with radio and television reception. Just the thing for vehicles equipped with two-way communication systems. Supplied in kits and factory-made sets.

PACKARD LOW-TENSION CABLE—As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's new low-tension cable with 404 insulation is slimmer, tougher, smoother, easier to install in tight places—oil-proof, flame-proof—and it does not age.

Packard
REG U.S. PAT OFF
TRADE MARK

FOREMOST BUILDER OF AUTOMOTIVE WIRING
PACKARD ELECTRIC DIVISION, GENERAL MOTORS, WARREN, OHIO

Service Suggestions . . . Continued from Page 158

Restricted Use of H-12 Spark Plug on Mercury

The Champion H-12 spark plug has been approved for service use on 1954 Mercury units when necessary to minimize lead fouling where extended idle and/or low speed operation is experienced.

The application of this service

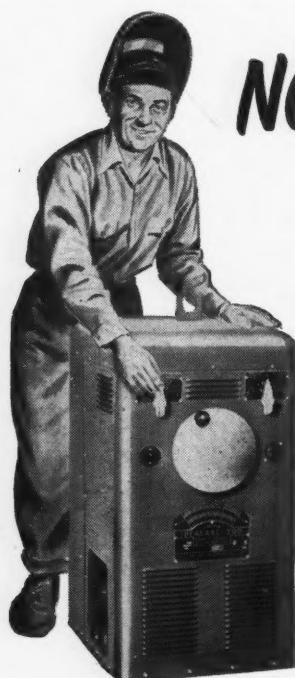
plug is extremely limited and the importance of restricting its use to low speed, low load, and moderate acceleration driving cannot be over-emphasized. Use of this plug in service other than as specified will result in rapid gap erosion and physical damage to the engine components due to the pre-ignition which will result.

Attention is drawn to the fact that this plus is intended to minimize lead fouling only, which can result from the type of driving described above. Standard gap and torque specifications apply.

Valve Tappet Adjustment On Studebaker V-8's

The practice of disconnecting the spark plug cables on the cylinder bank not being adjusted when checking valve tappet clearances on V-8 engines, is not recommended. It allows the bank to cool below normal operating temperatures and when the tappets on that bank are adjusted the clearances will not stay within specifications when the engine returns to normal operating temperature.

The reason for disconnecting the spark plug cables is probably to slow down the engine speed. If the mechanic wants to reduce engine speed to make tappet clearance adjustment easier, we suggest that he leave all spark plug cables connected but back off the carburetor idle speed adjustment screw to a point that suits him. It is important that all cylinders be firing in their proper order and that engine operating temperature be maintained.



NOW! ONE WELDER gives you both AC and DC welding current

***First** DC Welder for operation on single phase power line.

***First** Rectifier Welder with both current and voltage controls.

***First** Rectifier Welder with arc-booster starting on DC as well as AC.



Alter frames



Weld bodies and fenders



Add trailer hitches

Why compromise?

Lincoln Idealarc gives you *both* AC and DC welding current . . . *both* soft arc and forceful arc to handle *every* welding job . . . for the same investment in equipment. Get all the facts about Idealarc now. Write.

THE LINCOLN ELECTRIC COMPANY
Dept. 4001

Cleveland 17, Ohio

MAIL NOW

The Lincoln Electric Company,
Dept. 4001
Cleveland 17, Ohio

Please send Bulletin 1343 on
Lincoln Idealarc.

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LOOK TO

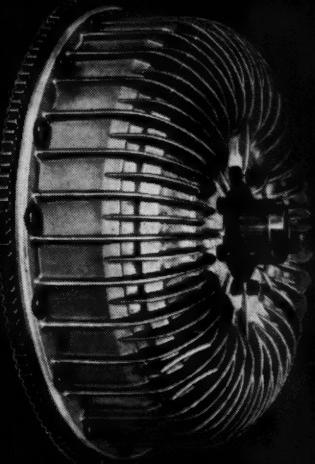
The World's Largest

LINCOLN

Manufacturer of

FOR LEADERSHIP

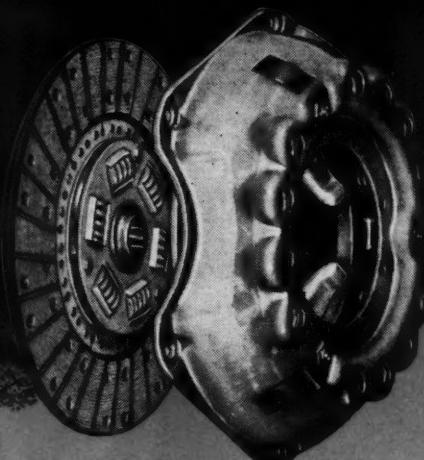
Arc Welding Equipment



KEEPING PACE

with the Horsepower Race

through
BORG-WARNER
Engineering...



Time was when automobile engines of 100 horsepower were just an engineering dream. Today, engines of 200 horsepower and up are common.

To carry the increased torque of such power-loaded engines is a giant-size job for clutches or torque converters. The big problem is to pack more "muscle" into these units without increasing their over-all dimensions.

Through advanced design and creative engineer-

ing, Borg-Warner's Borg & Beck Division has stepped up the capacity of its famous clutches and torque converters, while keeping within the size limits of the car manufacturers.

Compact, light in weight, precision built, these B-W Borg & Beck units transmit today's stepped-up horsepower smoothly, quietly, efficiently. They, too, carry on Borg-Warner's "design it better — make it better" tradition.

B-W engineering makes it work—B-W production makes it available

Almost every American benefits every day from the 185 products made by

THESE UNITS FORM BORG-WARNER, Executive Office, Chicago: ATKINS SAW • BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER SERVICE PARTS • CALUMET STEEL • DETROIT GEAR • FRANKLIN STEEL • HYDRALINE PRODUCTS • INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING • LONG MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHEBLER PRODUCTS • MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN CO., LTD. • NORGE • PESCO PRODUCTS • REFLECTAL CORP. • ROCKFORD CLUTCH-SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD. • WAUSAU • WESTON HYDRAULICS • WOOSTER DIVISION



BORG-WARNER

SURE THERE'S A WAY TO BUILD YOUR SERVICE BUSINESS...

AND UMS
HAS IT!

In addition to good service, a profitable repair business requires good parts with strong sales support and a ready-made market. That's where the famous UMS lines can help you. With General Motors' experience of building 50,000,000 cars behind these lines, you can be assured of their quality—General Motors' quality that's unexcelled in the industry!

As for the ready-made market—almost every other car that passes your door is equipped with these lines—offering a market that can't be matched!

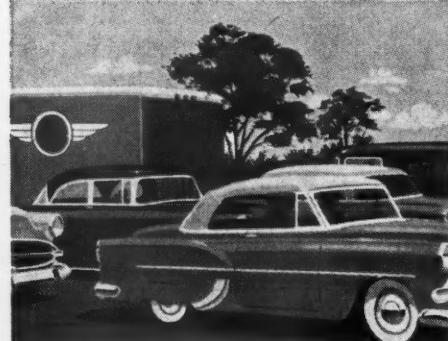
For sales support—read the rest of these two pages and you'll see that here is the most aggressive and complete support ever put behind any line of automotive parts.

That's why we say, "Sure, there's a way to build up your repair business . . . and UMS has it!"

★ Listen to Lowell Thomas on CBS Radio Network—see Your Newspaper for Time and Station

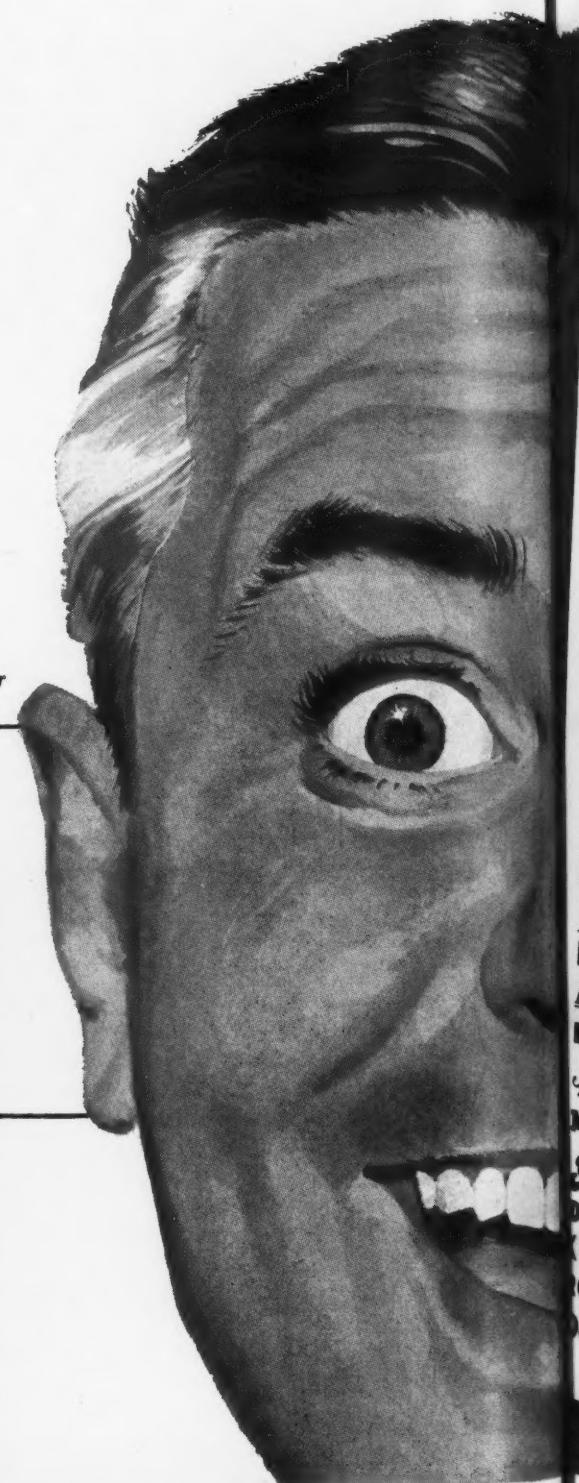
**WORLD'S
LARGEST
PRE-SOLD
MARKET**

As original equipment on nearly half of the cars on the road, these UMS lines have paved the way to a ready-made, pre-sold market that is unparalleled in the automotive industry. These are all "name" products that are known and respected for fine performance.



**GREATEST
MERCHANTISING
PROGRAM IN
THE INDUSTRY**

It's the greatest not only because it includes so many sales aids, but because merchandising programs are worked out individually for each product, and are specifically planned and *timed* to hit with all possible force—assuring good results.



UP

50,000,000
CARS' WORTH OF
EXPERIENCE
BEHIND THESE
UNITED MOTORS
LINES

ORIGINAL EQUIPMENT
CHASSIS AND ENGINE
PARTS FOR
BUICK • Cadillac
CHEVROLET • GMC
OLDSMOBILE • PONTIAC

PLUS—

DELCO BATTERIES
NEW DEPARTURE BALL BEARINGS
ROCHESTER CARBURETORS
DELCO BRAKE PARTS AND FLUID
HYATT ROLLER BEARINGS
MORaine GASOLINE FILTERS
HARRISON RADIATORS
AC GAUGES—SPEEDOMETERS
DELCO SHOCK ABSORBERS
Saginaw STEERING
DELCO AUTOMOTIVE MOTORS
HARRISON THERMOSTATS
IN-LITE BRAKE LININGS
Packard CABLE PRODUCTS
MORaine ENGINE BEARINGS
Guide LAMPS
DELCO ELECTRONIC PARTS
LAXON HORNS
ROCHESTER LIGHTERS
Delco-Remy STARTING,
LIGHTING, IGNITION

STRONGEST
ADVERTISING
SUPPORT EVER

A consistent advertising campaign, including 271 advertisements in leading magazines, has been designed to pre-sell your customers. It's national in scope, but local in effect. People in your community, your block, will read these advertisements—and you will profit.



NATION-WIDE
AVAILABILITY

The right part, right there, right when you want it. That's what doing business with United Motors means. There are nearby United Motors Distributors, backed up by the warehouse inventories of a nationwide system of GM and UMS parts warehouses.



MODERN
SERVICE
SCHOOLS

Facilities for free, expert instruction on the repair and maintenance of automotive equipment are available through UNITED MOTORS at the General Motors Training Center nearest you.



COMPLETE
CATALOG AND
SERVICE
INFORMATION

Quick, easy-to-use application and service information comes to you on all UMS lines, through the most complete and up-to-date catalog service in the industry.



SEE YOUR
UNITED MOTORS DISTRIBUTOR



GENERAL MOTORS

GENERAL MOTORS PRODUCTS



UNITED MOTORS LINES

Service Suggestions . . . Continued from Page 162

Air Cleaner Flexing and Wing Screw Breakage

If excessive air cleaner flexing, resulting from use of the paper gasket, is experienced on Lincoln or Mercury engines, the paper gasket should be removed and replaced with a new neoprene rubber type gasket.

Although this neoprene gasket is fairly resilient, its rebound characteristics enable the proper torquing of the wing-nut screw to be maintained indefinitely. The hold-down wing screw should also be replaced with a new type which is identical to the present one.

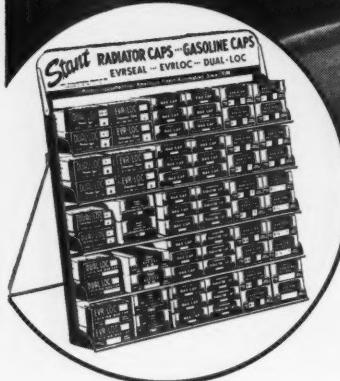
Since two types of air cleaners (round and oval) are used on the

subject Mercury engines and the round type used on subject Lincoln engines, it is important to install the correct gasket and wing screw combination required for each type of air cleaner.

Grooves Identify Correct Lower Rear Main Bearing

When replacing engine crankshaft bearings on Plymouths it is important to install the correct type lower rear main bearing. Two types are used on current P-25 engines. Torque converter equipped engines use a bearing that has a single drain-back groove across the face. On all other engines the bearing has two drain-back grooves and one drain hole. The torque converter lower bearing retains more oil and has a greater cushion to use against the additional thrust load of the converter.

calling all cars... Spring Cap Inspection



Merchandiser No. MU-600

Radiator cap examination is a necessary part of preparing cars and trucks with *pressurized cooling systems* for summer . . . to prevent overheating and water loss. Install the proper *Stant EVERSEAL Pressure Cap* if the customer's cap is broken, worn, or wrong cap.

display the new Stant Merchandiser

Simplifies your selling. Inventory at a glance . . . saves time . . . stock flexibility. Complete cap business in minimum space. Individually cartoned caps . . . clearly identified . . . easy to find. Eye-catching selling display in brilliant Stant colors.

sell the easy way

This perpetually-working silent salesman has high visibility and helps to remind customers to buy radiator and gas caps. Use two or more units to provide for stock expansion. Write for details . . . naming your jobber.

STANT MANUFACTURING CO., INC.
Connersville, Indiana



**Used on America's Finest Automobiles
as Standard Equipment**

Installing Brake Pedal Linkage on Mercury

When installing the brake master cylinder operating lever bracket, part number LA-22519-A, into the pedal support brace on Mercurys, it is necessary to install the lower retaining bolts with the head of the bolt to the inside of the pedal support, with nut and lock washer installed on the outside. If the installation is made with the nut to the inside of the pedal support it will restrict the full travel of the brake pedal.

Installation of the Intake Manifold Gasket

To minimize manifold gaskets burning in the area around the exhaust heat riser ports Lincoln and Mercury engines, a new gasket, part number EAM-9439-A has been released for service to replace EAD-9441-B. A steel grommet has been added at the exhaust heat riser port location, thereby minimizing deterioration of gasket as a result of exhaust heat.

Announcing a special introductory offer...

"3M's" NEW KIT...NEW TECHNIQUE



**SPECIAL
OFFER!**



NEW PISTOL GUN fits handy 7.5 oz. cans now used for "3M" Weatherstrip Adhesive and "3M" Super Weatherstrip Adhesive. Gun's screwdriver tip fits easily into windshield and backlite rubber, behind loose weatherstripping—allows faster repair work calling for no clean-up. Swivel spout means can remains upright at any angle of application. Ask your 3M supplier to demonstrate this new idea developed by "3M".

SAVE UP TO 20% with the special introductory kit that includes four cans of either "3M" Weatherstrip Adhesive or "3M" Super Weatherstrip Adhesive *plus* the time-saving new pistol-type applicator gun. Here's the fast, sure way to stop those pesky water leaks that often slow up your shop operations. Make sure you try "3M's" new technique now. Call your 3M supplier for this introductory offer.

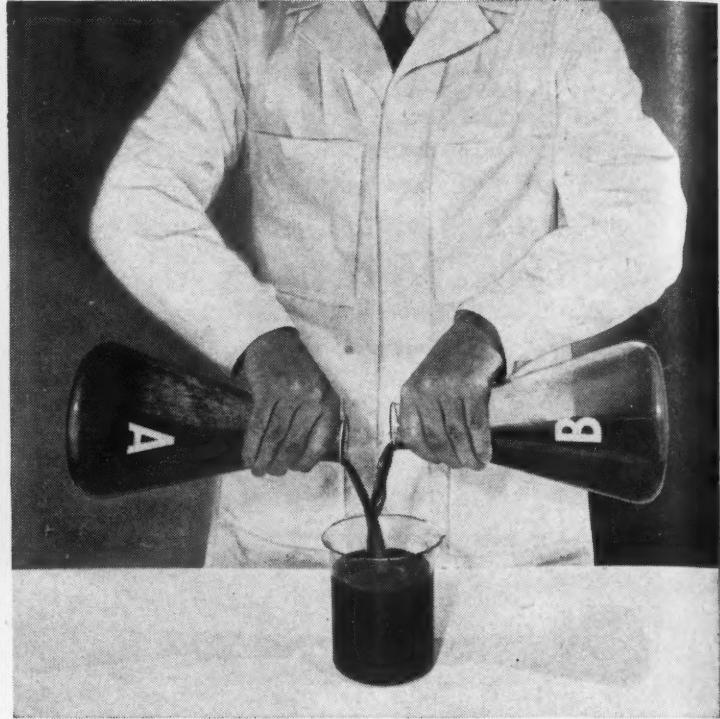
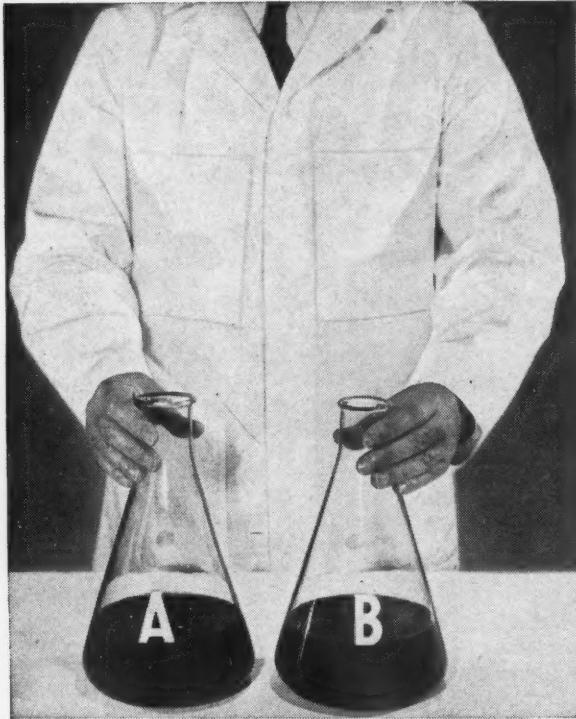
3M Automotive Products

Order Now from 3M Jobber



Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn.—also makers of "SCOTCH" Brand Pressure-Sensitive Tapes, "SCOTCH" Brand Magnetic Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. Export Sales Office 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.

Here's how Du Pont



You get a product advantage you can see. Look: Flask "A," above, contains anti-freeze with an oil inhibitor. Flask "B" contains Du Pont anti-freeze with exclusive *chemical* inhibitor. Some rust particles have been added to both. The difference? When flasks are emptied, notice how oily film in "A" causes rust to stick to the sides (just as it would gum up a cooling system). But see how Du Pont anti-freeze formulated with a *chemical* inhibitor holds particles in suspension. They empty out with the solution, leaving "B" clean—proof that Du Pont anti-freeze keeps a radiator cleaner!



You get the backing of motor experts to help you sell —men who know what's best for cars. Again this year Du Pont anti-freeze advertisements will carry testimonials of famous Indianapolis Speedway race drivers, and other motor experts, telling why they use Du Pont anti-freeze to protect their own passenger cars.



You get the biggest TV campaign in the industry. Every week of the 1954 football season, almost 10 million Americans tuned their TV sets to Du Pont's "Football Forecasts" show. After one year, this program's terrific popularity ratings have made it the hottest anti-freeze seller ever to come down the pike. And it'll be right back selling "Zerone" and "Zerex" for you in 1955!



Sell the anti-freeze team
that helps

DU PONT

REG. U.S. PAT. OFF. BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

builds sales for you



You get Anti-Freeze Week for extra sales. Joe Davis, of Peoria, Illinois, is shown here with the parts, chemicals and other related items he sold during Du Pont's 1954 Anti-Freeze Week promotion. You can do this kind of business at your station when you make the most of Du Pont Anti-Freeze Week. It's more than a sales tool; it's a real opportunity to get started early on winter servicing . . . before the first freeze jams your station. That's why dealers all over the country say, "Du Pont Anti-Freeze Week is the hottest idea ever!"



You get a sales boost via Western Union! All Du Pont advertising—TV, radio, magazines, newspapers, billboards—will say, "Call Western Union by number, ask Operator 25 for the name of your nearest 'Zerone'-'Zerex' dealer." She will send pre-sold customers right to you!

you sell!

Du Pont makes only Zerone® and Zerex®
... no other anti-freeze brands
Get your order in early!

The New York Times
NOVEMBER 6, 1954

E. I. du Pont de Nemours & Co., Inc., in a drive to stop price cutting on its fair traded Zerone and Zerex anti-freezes, has gone to court and obtained temporary injunctions against manufacturers.

Fair Trade Violations in Anti-Freeze Sales Fought

DETROIT. The Fair Trade Commission has filed suit against the Detroit-based E. I. du Pont de Nemours & Co. Inc., to stop price cutting on its fair traded Zerone and Zerex anti-freezes. The suit was filed in U.S. District Court here by the commission against the company and its distributor, the Motor Sales Corp. of America, Inc., of Detroit.

The suit charges that the company is violating the federal Fair Trade Act by selling its anti-freezes below cost. The commission claims that the company is cutting prices to force out its competitors.

DuPont Gains Court Order To Guard Antifreeze Price

WILMINGTON, Del.—A Delaware court has given E. I. du Pont de Nemours & Co., Inc., a temporary injunction against price cutting on its Zerone and Zerex anti-freezes.

The injunction was granted by Justice Edward J. Murphy of the Superior Court of the State of Delaware.

In the suit, the commission charged that the company was cutting prices to force out its competitors.

Automotive News, NOVEMBER 22, 1954

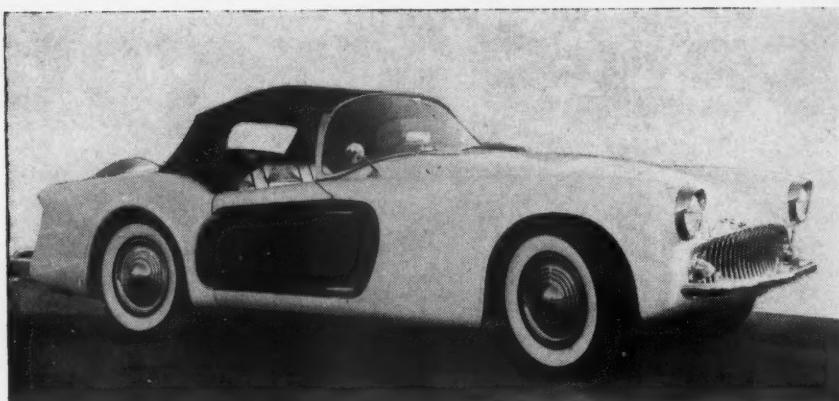
Anti-Freeze Sold Cut-Rate, Discount Store Fined \$100

BOSTON, Nov. 22.—A Boston discount store has been fined \$100 for selling antifreeze at cut rates, the Massachusetts Department of Consumer Protection said yesterday.

The store, which is the same one that was fined \$100 for selling gasoline at cut rates last year, was found guilty of violating state antitrust laws.

You get protection against price cutting. New streamlined procedure nips price cutting in the bud (in states having Fair-Trade laws), enables you to sell your DuPont anti-freeze at the Fair-Trade price—and at full profit. Du Pont refuses, too, to condone employee sales that could eat into your profits.





THE NEW KURTIS 500-M sports car features a body of composite steel and glass fiber construction, tubular steel chassis, and torsion bar suspension. It is powered by a Cadillac 230-hp engine and Hydra-Matic transmission. The car has a 99 inch wheelbase, 56 inch tread, 49½ inch overall height with the top up, and weighs 2500 lb.

AMA Doubles Grant For Smog Research

The automobile industry's concern over the smog problem in Los Angeles is further pointed up in an announcement that the Automobile Manufacturers Assn. is making another contribution to the Los Angeles Air Pollution Foundation, the second such grant it has made within the last year. In addition to doubling its own research, the automobile industry will donate \$100,000 to the Los Angeles organization. Last year the industry contributed \$55,000.

At present, at least 21 separate research projects are under way investigating the Los Angeles smog problem. Car manufacturers are spending approximately one million dollars on their own smog research programs.

Their primary concern is to find out whether unburned hydrocarbons contribute to the smog which has plagued that part of the country. Studies so far indicate that emission of these substances can be reduced in vehicle exhausts by 30 to 50 per cent.

Model 111

Valve-Gapper in position on 1954 V-8 Ford Engine.

Mechanic using Valve-Gapper on Chevrolet Engine.

Don't Set Valve Gap "Close Enough..."

Set it Exactly Right!

IN HALF THE TIME

P&G Valve-Gapper

...the new precision instrument that utilizes an entirely new principle in adjusting valve clearance, or "gap" on valve-in-head engines. The Valve-Gapper assures *micrometer accurate* valve clearance adjustment and *instant* location of noisy or defective hydraulic lifters.

- Reduce Valve Adjustment Time approximately 50 per cent!
- Check the Valve Gap Visually and get *Micrometer Accurate* readings BEFORE, DURING and AFTER Adjustment.
- The VALVE-GAPPER is Fast, Easy to Use—both hands are FREE to make adjustments while dial indicator registers exact setting.
- Use the VALVE-GAPPER for instant location of defective hydraulic lifters.
- Use the Dial Indicator for other shop tasks.

MODEL 201—FOR GM DIESEL ENGINES

Enables mechanics, owners, operators to—

- Adjust Valve Clearance
- Time Fuel Injectors • Balance Fuel Racks

Order from Jobber or Write P&G Mfg. Co.

P&G MANUFACTURING CO. Dept. 12C
2262 N. Albina Avenue, Portland 12, Oregon

Please send me Valve-Gapper literature and prices.

FIRM NAME _____

YOUR NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

ENGINES SERVICED _____

MY JOBBER IS _____

Air Conditioning Kit by Chrysler

Chrysler Corporation is now offering a package of all necessary components for field installation of its air conditioning unit. The Chrysler Division announced the availability of the system for its dealers last year, but now the special kit has been extended to the Dodge V-8 and De Soto line of cars. It was previously available factory-installed only. The unit will sell for \$567, same price as the factory charges for installing it.

Attention
Independent
Repair Shops...

Lipe's Factory Exchange Plan Makes Dollars and Sense!

Next time you have a clutch repair job, point out to your customer the advantages of a Lipe Factory Exchange Unit . . .

HE GETS a clutch rebuilt with *genuine* Lipe parts—assembled and tested to Lipe's original equipment specifications. He gets his truck repaired and in operation sooner. He gets a like-new clutch that's *guaranteed* right.

YOU GET more time to service more trucks. You get more satisfied customers. You get bigger profits!

Use a Lipe Factory Exchange Unit on your next job . . . it pays! Call your distributor today—his number is in your classified phone book.



NEW ELECTRONIC "BRAIN" CHECKS CLUTCH BALANCE

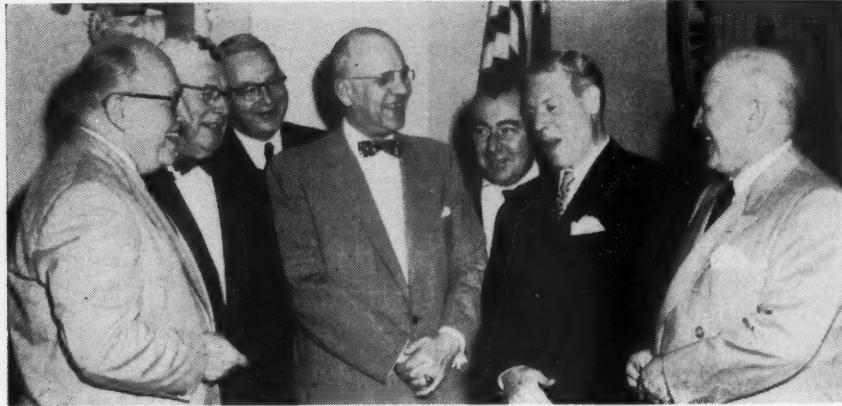
Here's one of the reasons you'll make increasingly better profits with Lipe Factory Exchange Units. Every rebuilt clutch is tested on this new electronic oscilloscope recorder. The slightest vibrations in a spinning clutch are amplified to show whether or not it is correctly balanced. No other clutch rebuilders has a machine like this — no other rebuilders takes the trouble or goes to the expense to see that your Lipe reconditioned clutch justifies your skill and satisfies your customers.



Lipe - ROLLWAY CORPORATION

Manufacturers of Automotive Clutches and Machine Tools

Syracuse 1, N. Y.



A GROUP OF DIGNITARIES are shown at the Automotive Service Association of Philadelphia's 33rd Annual Meeting. Left to right—Raymond K. Gillen, Chairman, Governor's Highway Safety Advisory Committee; Frank E. Gibble, the new president; Robert A. Brenholz, Governor of Optimist International, District 2; R. A. Harp, president of Auto Equipment & Service Co. Inc., retiring president; Frank Tighe, Editor of Motor Age; James P. Falvey, president of the Electric Auto-Lite Company; Gordon Z. Spencer, service-sales manager of Trico Products Corp.

ONE POSITION
CAR SPOTTING

NO COMPLICATED
CHARTS OR
BLUEPRINTS NEEDED
... NO INTRICATE CAR
MANEUVERING...

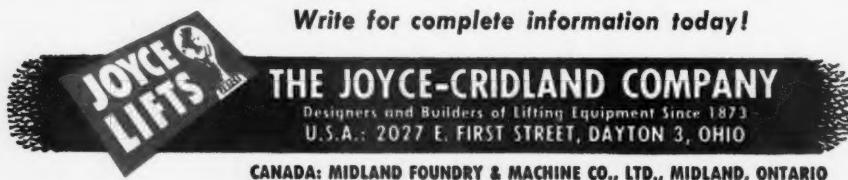
because the NEW JOYCE
H-master FRAME LIFT
IS DESIGNED TO FIT THE LIFT TO THE CAR ... NOT THE CAR TO THE LIFT!

BENEFIT
from these
H-master
FEATURES:

- ✓ BETTER LUBRICATION . . . car is supported by its frame, wheel suspensions are completely relaxed assuring free flow of lubricants. Wheels are free for tire and brake service.
- ✓ FAST, PROFITABLE MAINTENANCE WORK . . . because of greatest under-car accessibility. Compact H-Frame of lift parallels car frame.
- ✓ LOW COST INSTALLATION . . . just one jacking unit and simple plumbing to install. Wheel locator mounts on top of floor . . . no floor depression.

Choose from 8 great models with safety features such as . . . automatic, positive locking, safety latch . . . and "Magne-Guard" low oil control.

Write for complete information today!



New License Mounts Coming on '57 Cars

Assurances have now been received from enough U. S. and Canadian jurisdictions to allow the automotive industry to schedule 1957 introduction of standard license plate mountings. These would fit the standard 6- by 12-inch plate recommended by the American Association of Motor Vehicle Administrators. Fifty of the 65 North American jurisdictions, containing 80 per cent of current vehicle registrations, have given formal assurance of approval by 1956 at the latest. Prospects are rated good for early coverage of 92 per cent.



BRYAN GETS MEDAL for AAA Driving Title—Col. A. W. Herrington (second from right), chairman of the American Automobile Association contest board, pins a diamond-set gold and platinum medal on Jimmy Bryan (second from left) of Phoenix, Ariz., here today, emblematic of Bryan's 1954 AAA race driving national championship. He amassed more points than any driver since 1926. Also awarded diamond-studded medals were Manuel Ayulo (left), Burbank, Calif., who finished second, and Jack McGrath (right), South Pasadena, Calif., third-place winner.

New SIOUX Electric IMPACT WRENCH

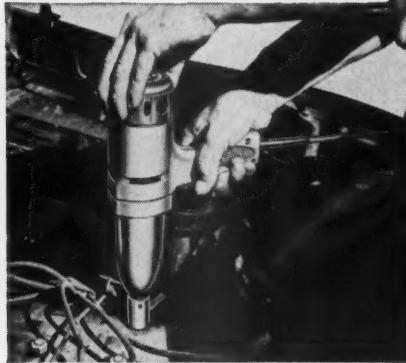


with the EXCLUSIVE REVERSE CAP SWITCH LOCK!

Your SIOUX Impact Wrench can't be reversed with the switch on! This exclusive design feature eliminates a common cause of burned commutator-brushes, and switch contacts. It's one of the reasons SIOUX Impact Wrenches will last longer!



REMOVING WHEEL NUTS



TIGHTENING CYLINDER HEAD BOLTS



REMOVING SPRING SHACKLE NUTS

SPECIFICATIONS

Wrench No.	Capacity Bolt Size	Socket Drive Size	PRICE
325	3/8"-5/8"	1/2" sq.	\$ 99.75
330	3/8"-1 1/16"	1/2" sq.	127.50

Free Speed R or L 2,000 RPM, Both Models; Impacts Per Minute 2,000, Both Models

For more information write today!

Please send complete information and prices on

SIOUX IMPACT WRENCHES

NAME _____
ADDRESS _____



ALBERTSON & CO., INC.
SIOUX CITY, IOWA, U.S.A.

USE SIOUX ALL THE WAY THROUGH...

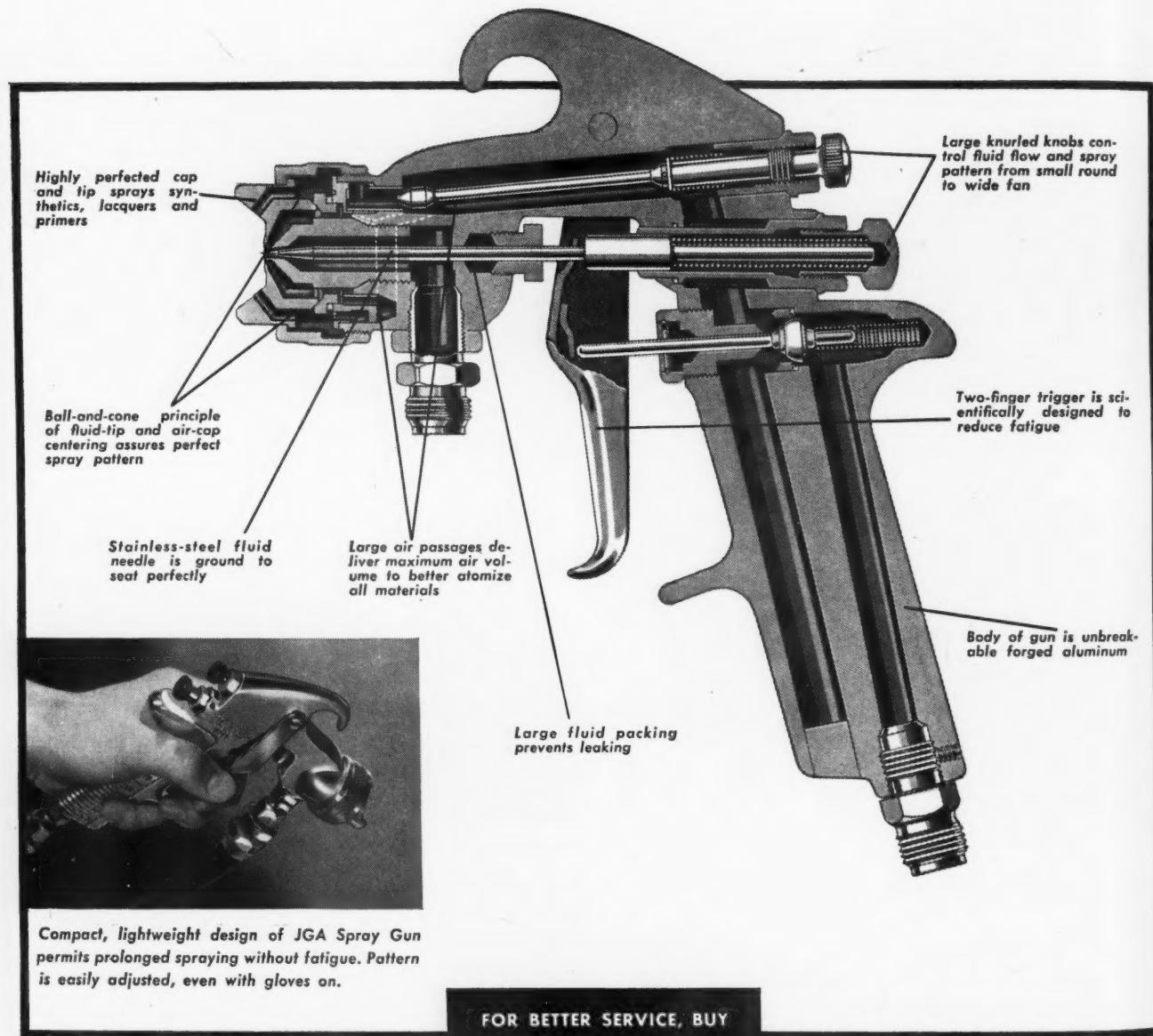
ELECTRIC DRILLS • SANDERS • POLISHERS
GRINDERS • SAWS • IMPACT WRENCHES • VALVE SERVICE EQUIPMENT

DeVilbiss JGA Gun lets you apply factory-perfect finishes at production-line speeds

OWN THE spray gun with the trigger you love to touch: the DeVilbiss JGA Gun.

A high-speed production-type gun, the JGA is extremely versatile. Can be readily adjusted to spray a small pattern for touch-up jobs, or a large pattern for large panels and over-all painting; permits maximum speed and factory-perfect results with any finishing material. Cuts down on operator fatigue, too. For the DeVilbiss JGA Gun is compact, comfortably balanced—and weighs a mere 1 lb. 6 oz.

Forged-aluminum body of the gun is practically indestructible. For better, faster finishing, pick up a JGA Gun at your DeVilbiss jobber's, today! It will serve you well for years and years. Invest wisely and get this finest of all spray guns—you'll appreciate the difference every time you use it.



THE DEVILBISS COMPANY
Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario
London, England

FOR BETTER SERVICE, BUY

DEVILBISS



Look to DeVilbiss for the finest in spray-painting accessories:
Fluid Cups, Hose and Connections,
Air Transformers, Touch-up Kits

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES THROUGHOUT THE UNITED STATES, CANADA AND THE WORLD

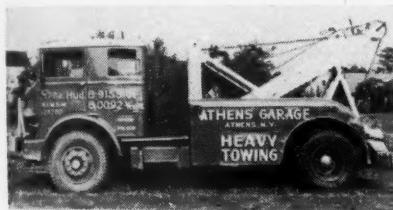
Letters to the Editor

Heavy Duty Wrecker

Editor, MOTOR AGE:

I read your interesting article on wreckers in a recent issue and thought you might be interested in seeing a picture of my wrecker.

It is a custom built C 90 Autocar. Her weight gives an unbelievable winching power, without being tied down. The boom is in three 10-foot sections and can also be boomed practically straight up. There are two winches, carrying $\frac{5}{8}$ -inch cable, that work independently from each other and it has air lines and outriggers for towing.



There is a one cylinder, 12-volt auxiliary generator to provide light when working at night. This also charges the truck battery. One side has lockers filled with cribbing from 2 by 4 inch up to 10 by 10 inch blocks. The other side has tools, flares, gear lube and other necessary gear.

There is still one thing I have to add; either a two speed axle or an auxiliary transmission. Erich A. Schubert, Jr., Athens, N. Y.

Likes Foreign Car Service

Editor, MOTOR AGE:

We enjoy your foreign car articles. Our company has been in business on American cars for many years, but nothing has brought us the prestige and free advertising that foreign car service has.

Owners presume that if we can maintain these fine machines, we also are qualified to do their new American car service; this results in a high percentage of new car work.

Also, with the European suspen-

sion and weight distribution, we need not bother with power steering. Foreign car owners are enthusiasts not desiring automatic transmissions and that also simplifies things. Power tops, window seats and brakes are also less popular abroad, as are automatic chokes and dimmer switches. All in all, the excellent brakes, engines, transmissions, suspensions and designs make for interesting and accessible work.

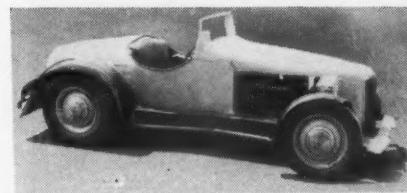
So often, the foreign car is from a stable of several cars, so rush is no object in service. Owners appreciate fine design and will allow work to be done on an hourly basis until it is perfect.

George E. Hiscott, IV, Hiscott's V-8 Service, Evanston, Ill.

Builds Custom Car

Editor, MOTOR AGE:

I thought the following item might be of interest to your readers. W. B. Parshall, of Tyrone, Pa., built a car with parts taken from sixteen different automobiles. He souped-up 145 hp Ford truck engine. The car is 38 inches high, has a wheel base of 88 inches and weighs only 1700 lbs. The body is welded and bolted together. There are 5.50-15 wheels on the front and 7.10-15 wheels on the rear. The

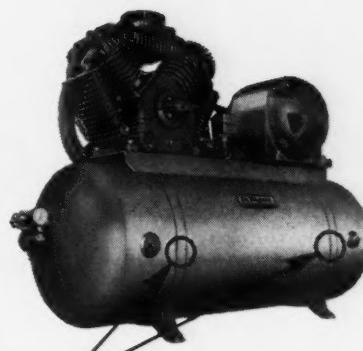


gear shift is a standard three speed, with reverse located on the left hand side of the steering wheel.

Mr. Parshall is looking for a safe place to try out his car. He tried it on the Tyston, Pa., oval, but the straightaways were too short to open it up. He says top speed will be over 100 mph. Arthur K. Moore, 533 North 3rd St., Bellwood, Pa.

(Continued on page 178)

22.6% more air per power dollar



Floating tank mount on DeVilbiss compressor outfits completely eliminates weld strains on the air tank. Heavy steel bands gird the tank, acting as a reinforcement, as well as a very solid anchor, between the compressor mounting and the four base legs.

The efficiency of DeVilbiss air compressors means higher actual delivery—as much as 22.6% more air per power dollar than most other compressors. Many times, DeVilbiss outfits pay for themselves through lower maintenance and depreciation costs.

In addition to the tank mount, every DeVilbiss compressor includes these features: A.S.M.E.-approved air tank, check valve manifold, automatic pressure switch, diamond-bored pistons, cylinder head with removable valves, quality electric motor or gas engine.

If you have compressed air problems, let your local DeVilbiss jobber analyze your needs.

THE DEVILBISS COMPANY

Toledo, Ohio
Santa Clara, Calif. • Barrie, Ontario
London, England
Branch Offices in Principal Cities

FOR BETTER SERVICE, BUY

DEVILBISS

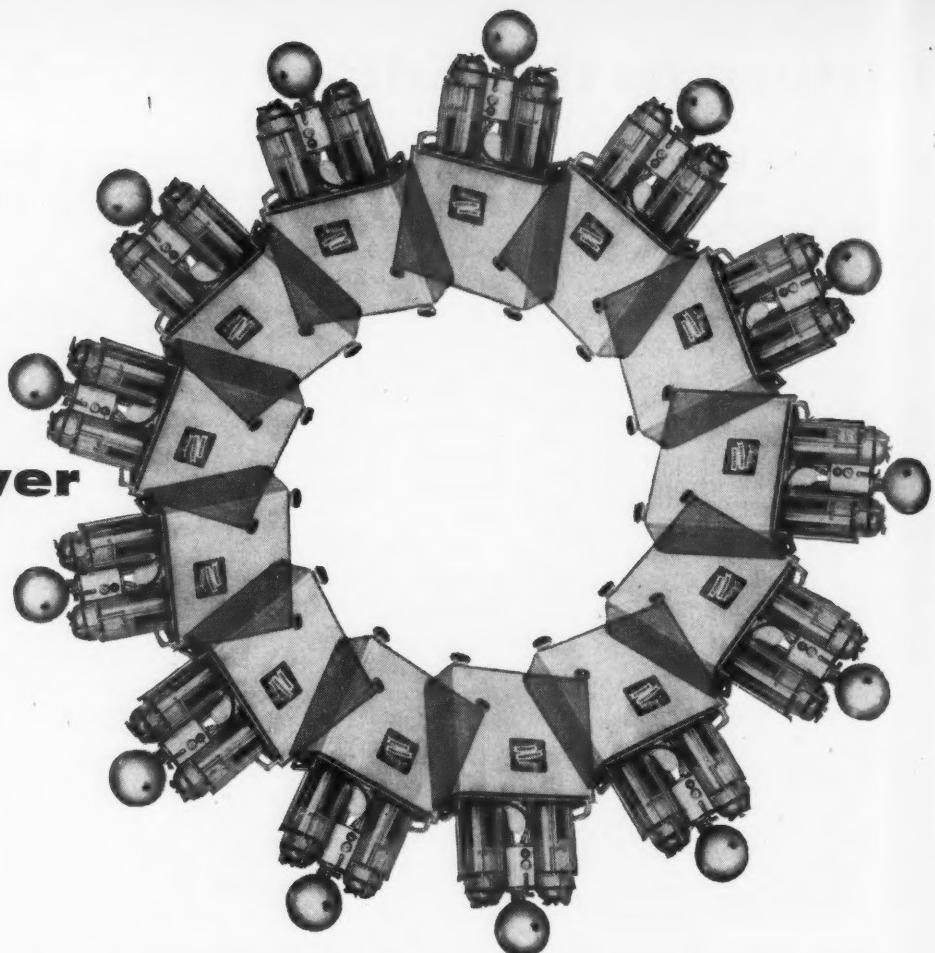


Spring

change-over

time to

PREVENT



OVERHEATING

Now that change-over time is here, you'll be draining anti-freeze.

With the New Choldun Pressure Purger, you'll be earning extra dollars by being fully equipped to render complete "on-the-car" cooling system service. More and more anti-freeze manufacturers agree: Anti-freeze should be drained and the cooling system "power-flushed" every spring in order to maintain peak cooling system efficiency throughout the hot months.

The Choldun Pressure Purger "power-flushes" the radiator and block in less time than it takes to remove a radiator, and opens a vast, new service market for you. It makes your spring change-over program blossom with bigger profits and insures customer satisfaction. Now is the time to prepare for this added business and to take advantage of Choldun's sensational \$100 trade-in program*.

CHOLDUN Mfg. Corp., New Haven, Conn.

Tell me all about the Choldun Pressure Purger and the Giant Trade-In Deal.

NAME:

ADDRESS:

CITY & STATE:

MA

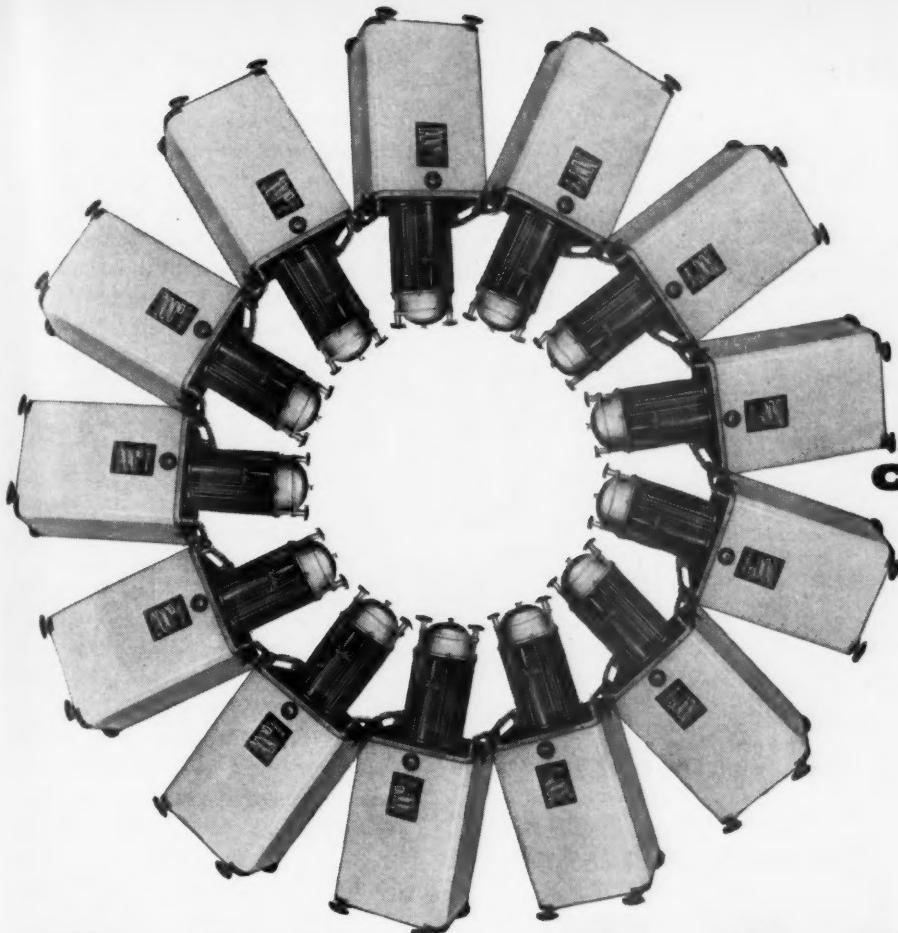
\$100 IN TRADE*
FOR YOUR OLD
COOLING SYSTEM
CLEANING EQUIPMENT

For a limited time only, your old equipment, regardless of make or condition (even a flush gun), is worth \$100* in chemicals and merchandising aids with the purchase of a new Pressure Purger.

*4 cases Purgite
@ \$24 per case = \$96
1 Giant Outdoor Banner = 4

FREE **\$100**

50c PER DAY PAYS FOR THIS UNIT—FINANCED THROUGH COMMERCIAL CREDIT PLAN



Spring
change-over
time to
INCREASE

OIL SALES

Convert 9 out of 10 oil checks into profitable oil changes

**\$25 CASH
or
\$60* IN CHEMICALS**

For your old oil changer (regardless of make or condition . . . electric or hand operated) when traded for a Choldun Oil

Merchandiser.

*Resale Value

A simple flick of the switch makes oil checking 9 times more profitable. With this operation you not only check the quantity of your customer's oil, but you also show him the condition of his oil when it is pumped into the Choldun Oil Merchandiser's glass cylinder. You'll find yourself selling more oil changes than ever before — simply on the basis of your customer seeing the dirty oil taken from his car's crankcase (via the dip stick hole). Selling crankcase flushes (without running the car engine) becomes a snap . . . Your oil and filter sales will increase tremendously . . . and what's more, you'll never lose a customer because your lift or pit is tied up. Oil checking, changing and flushing can be easily accomplished anywhere, any time — even at the pump island.

For a limited time only — you can trade-in your old, obsolete oil changer for a New, sales stimulating Oil Merchandiser.

CHOLDUN

Mfg. Corp., New Haven, Conn.

Rush me details on the Choldun Oil Merchandiser and your Giant Trade-In Program.

NAME: _____ MA

ADDRESS: _____

CITY & STATE: _____

40c PER DAY PAYS FOR THIS UNIT—FINANCED THROUGH COMMERCIAL CREDIT PLAN

Letters to the Editor . Continued from Page 175

A Welcomed Stranger

Editor, MOTOR AGE:

I had a most unusual experience recently that I'd like to pass on to you. One Saturday, recently, I left Fargo, N. D., at about 1 P.M. en route to Winnipeg, Canada. At Crookston, Minnesota, I somehow got on Route 75 South instead of

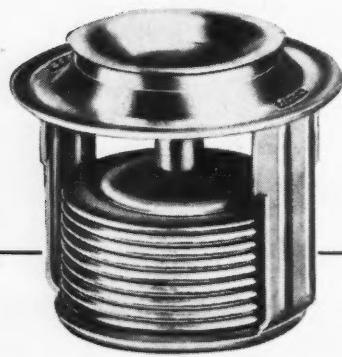
Route 75 North. Discovering my error a few miles out of town I attempted to turn around and go back. I backed my 1954 De Soto Powerflite into a farm road and there it stayed. The engine ran but the car wouldn't move.

A farmer gave me a lift to town and directed me to Fortier Motor Sales, Chrysler-Plymouth dealer.

(Advertisement)

Why Stock Two Thermostats When One Will Do The Job?

New Flexon Thermostat



Serves Both Pressure and Non-Pressure Systems

No LONGER is it necessary to stock one line of thermostats for the new pressure cooling systems and a second line for older cars without pressure cooling systems. Extensive research and development by Flexonics Corporation has now made possible a single thermostat to do both jobs.

Secret Is Charge

The ability of the Flexon Thermostat to do both jobs results from a new type charge for the bellows. The new charge provides much greater opening pressure in the operating range. Consequently the new Flexon Thermostat operates with equal efficiency in both pressure and non-pressure systems.

Better Performance

A by-product of the use of the new charge is faster opening—two to five times faster than other thermostats. Opening is completed within a narrower temperature range so any tendency to "flutter" is minimized. These charac-

teristics assure precise control of engine temperature and more efficient engine performance results.

Fail-Safe Design

In the rare event of a failure—in pressure and non-pressure systems alike—the Flexon Thermostat opens. This permits continued operation of the car until the thermostat can be replaced.

Bulletin Available

A new bulletin giving full sales information is just off the press. Copies are available from your Flexonics Jobber or directly without obligation. Ask for yours, today.

Place Orders Early

With the approach of the spring buying season, check your needs now. You'll be pleased to see how a single thermostat for two jobs simplifies your buying and stocking problems. Contact your Flexonics Jobber or FLEXONICS CORPORATION, 1398 S. Third Ave., Maywood, Illinois.

FLEXONICS CORPORATION also manufactures a complete line of flexible metal hose and tubing products. Write for data.

My car was towed into the shop before 2 o'clock.

All six mechanics were busy at the shop but the boss, Mr. Fortier, put two of them on my car right away. The men tore the transmission down and, even though they were handicapped by not having a De Soto factory manual or the new Chilton Flat Rate (they had older editions), they found the trouble by six that evening. It seems that my shift in Powerflite was jammed. In spite of the fact that closing time was 6 o'clock, the manager and the parts man stayed till 6:30 to be sure I got back on the road as quickly as possible.

I was prepared to pay a price of \$50 or more for this job, since I was a total stranger to these people. But I soon found how wrong I was. The bill was \$4.55. They explained that, because they had no Flat Rate on a 1954 De Soto, this was their price for the job.

Here were folks who are just 'good Americans' doing a friendly deed. It convinced a city boy like me that you have to get out of the big city before you can really know people.

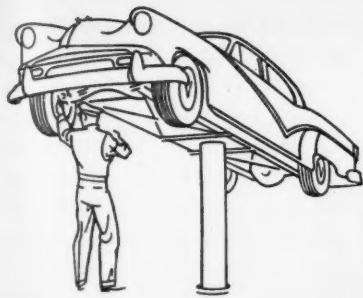
*Sidney Bushler
Skokie, Ill.*

GM Scholarships Draw 10,000 Students

Widely acclaimed by colleges for its far-reaching impact it will have in strengthening independent schools, the General Motors plan to provide 100 college scholarships each year has attracted more than 10,000 applicants from high schools.

First scholarship winners, who will receive awards ranging from \$200 up to \$2000, depending on "demonstrated need," will be notified about May 15.

One phase of GM's new \$2 million-a-year program to support higher education, the program provides at least one award in each state, the District of Columbia, Alaska and Hawaii. When the overall program is in full operation, it will be providing benefits to 1400 students in 306 colleges and universities.



Discover today's **BIG PROFIT**
in brake fluid service with...

New **DU PONT No.7.** **BRAKE FLUID KIT!**



ONE-MAN OPERATION. You can now fill master cylinders and bleed brakes faster—easier than ever before! It does the TWO jobs . . . but at only a fraction of the cost of expensive brake bleeders. It's portable, no air connection needed . . . no aeration or fluid contamination possible. Patented 4-way bleeder plug fits most master cylinders. Turn out more profitable brake jobs per day. Ask your wholesaler today.

PLUS—200 Customer Mailers



1 Wall Chart—Illustrating Effect of Substandard Fluid

1 Window Poster



DU PONT NO "7" PRODUCTS
FROM CHEMICAL RESEARCH . . . FOR EASIER CAR CARE

50 (Door-Jamb) Stickers



1 Service Instruction & Selling Ideas



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

+ Join the Du Pont No. 7 Crusade for Brake Safety . . . by adding Brake Fluid Service!

Heating-Cooling Unit on Ford V-8's

Ford has announced a heating and cooling air conditioner combined in a single unit for its V-8 passenger cars only. Heretofore Nash has been the only company to offer a combined heating and cooling unit.

Contrary to the rest of the in-

dustry, Ford is offering the unit only as a dealer installed accessory. The list price is \$435, plus installation charges.

All components, except the evaporator and plenum chamber, are located ahead of the fire wall. The 2-cylinder compressor is mounted on the right side of the engine and can be made inoperative during cold weather by removing two bolts from the drive pulley. A

thermal switch to prevent freeze-up, activated by a feeler bulb, is activated to stop the refrigeration cycle when the temperature at the condenser drops to approximately 28 deg. It automatically starts operating again when the temperature rises to approximately 34 degrees.

The condenser is mounted ahead of the radiator behind the grille and the receiver-drier is located in the engine compartment. Freon 12 is the refrigerant. The evaporator is mounted up under the instrument panel at the right side of the passenger car compartment. To it is attached a plenum chamber from which the air is directed through ducts. The heating element mounts forward of the evaporator. All temperature control from full cooling to full heating is controlled by a single lever with horizontal travel on a special control panel.

Outside air enters a screened inlet through an air duct intake located back of the grille on the right hand side and flows through a "T" air valve mounted inside the engine compartment. From here it is channeled either through the heating element or the cooling unit into an evaporator chamber equipped with a double outlet blower.

One outlet delivers air to a plenum chamber, with outlets at the bottom to direct the air flow down along the front seat compartment floor of the car. From the left hand end of the plenum chamber a flexible duct extends up to a register located at left side of radio speaker grille on top of the instrument panel.

A similar duct, from the blower's second outlet, directs air up to another register at right side of radio speaker grille. Each register has two outlets. The rear one, a simple flapper, or damper, allows a concentrated air flow to be directed backward and down, or it can be shut completely. The forward outlet is circular in shape and has directional louvers. A center knob provides complete shutoff of air flow. The circular outlets can be rotated a full 360 degrees, so that air flow can be directed to the passenger's comfort. In defrosting, they can be directed to any spot on the windshield.

More drum lathe per \$ invested - AMMCO SAFE TURN DRUM LATHE

MODEL 3000

AMMCO

★ Turns drums 6" through 24" diameter - 7½" deep.

★ Rugged construction, tremendous 2½" Spindle and giant 3½" Cross Feed Support assures accurate cutting on all drums.

★ Exclusive INFIMATIC FEED allows infinitely variable adjustments from .002" to .020". Feed may be adjusted while cutting for maximum smooth stock removal.

★ Protective Boots fully enclose entire Spindle, Cross Slide, and Lead Screw against chips and grit.

★ Self-aligning 1½" hex Boring Bar.

★ Cabinet, Grinder and Heavy Duty accessories available.

Ask for a demonstration in your own shop

AMMCO TOOLS, INC. 2102 Commonwealth Avenue., North Chicago, Illinois

PUROLATOR'S 3-pronged attack

... captures oil filter business for you

Again, Purolator makes it EASY for YOU to stock—EASY for you to sell—EASY for you to profit on refill sales!

#1. Purolator's Bonanza '55. Stocks you with Purolator's fastest selling refills ... gives you a handsome TROY ROBE at a give-away price . . . hands you a BIG PROFIT. (Make sure you get yours! Contact your Purolator supplier now!)

#2. Purolator's Spring Oil Filter Check-Time. Starts April 1st—right at oil change time. Big 2-page, 2-color ads in the national magazines.

Powerful point-of-sale posters and displays. Will sell your shelves bare in a hurry. (Check your stock now. Remember . . . there's a Purolator engineered to fit every make and model of car.)

#3. Purolator's 1955 Sales Aids. A complete package. Best, most powerful ever offered to dealers. Includes point-of-sale posters, service chart—everything you need to make every car count on your cash register. Make sure you get yours.

If you aren't lined up, get in touch with your supplier Now!

Purolator Registered U. S. Pat. Off.

PUROLATOR PRODUCTS, INC., Rahway, New Jersey and Toronto, Ontario, Canada

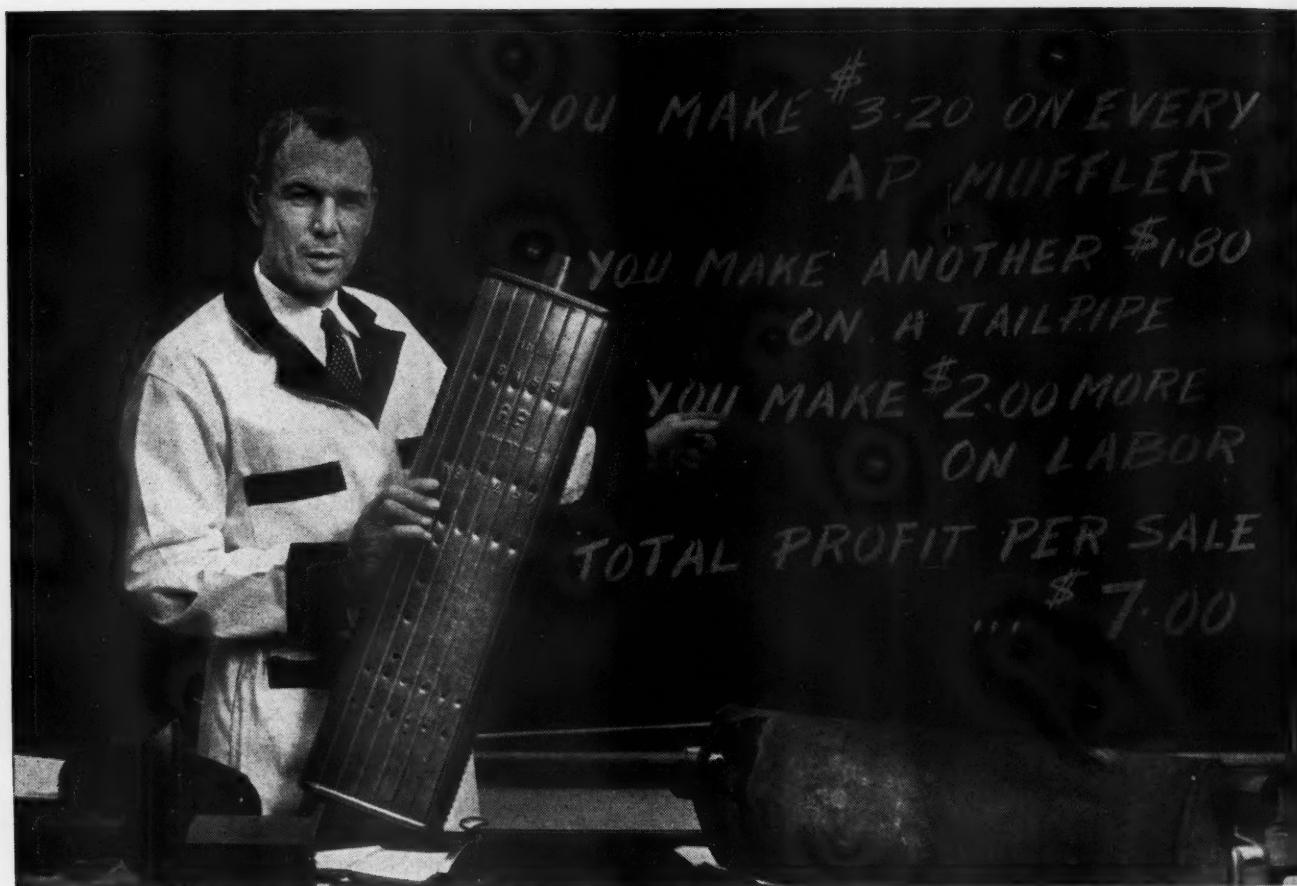
PurOlator

World's finest OIL FILTER



BECOME AN AP® MUFFLER SPECIALIST

A quick, easy operation with

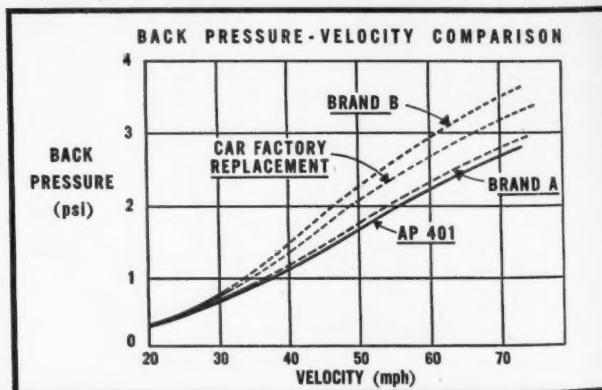


AP Muffler Specialists are making big profits today by helping their customers get the most out of modern high-powered engines. You can do the same thing. All it requires is registration with your AP wholesaler, a minimum basic stock, and the determination to take a look at the muffler on every car that comes into your shop. If you do this systematically, you should be able to make at least 6 extra sales a week for the next 50 weeks—a total of \$2100 extra profit. You'll find that 3 out of every 10 cars you service need a muffler or a pipe or both. And this is the kind of business that doesn't tie your shop up, because the average muffler replacement job can be handled in half an hour or less.

And when you install AP mufflers, you know you are giving your customers not just a silencer, but a muffler that will enable them to get all the horsepower they paid for, better gasoline mileage, faster pick-up and $\frac{1}{3}$ longer life.

The chart makes plain how the AP muffler for a popular low-priced car stacks up against competition with respect to back pressure. This is typical of every muffler in the AP line.

Ask your jobber to show you the AP "Inside Story." It's an eye-opener that you should be sure to see.



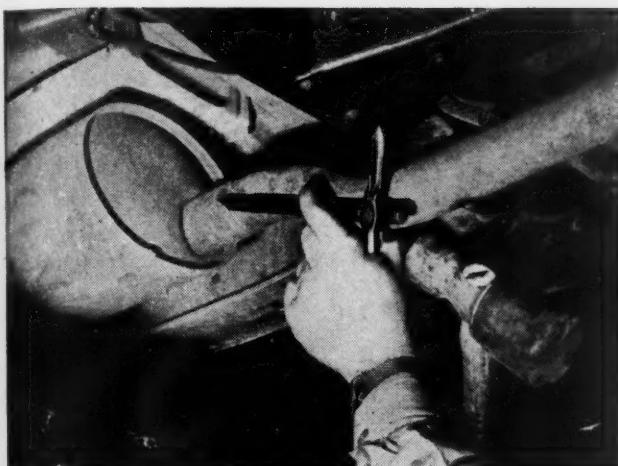
Low back-pressure in AP mufflers is clearly indicated in this chart of competitive tests with three other leading brands—one of a series that showed the AP muffler ahead every time.



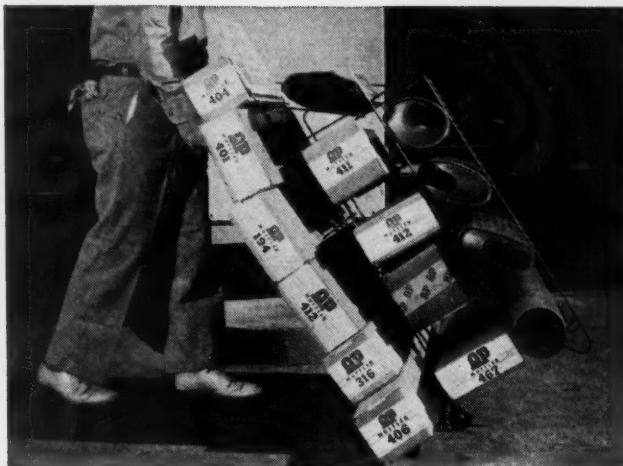
BETTER-BREATHING MUFFLERS—DESIGNED FOR TODAY'S

AND MAKE OVER \$2000 EXTRA A YEAR

fast turnover, high profit



Easier and faster with AP's time-tested muffler removal tool. Cuts down average installation to 26 minutes. Tool is available from your jobber at \$2.50—or free with basic muffler assortment.



Mobile merchandiser of basic muffler stock has good display value and can be quickly and easily moved in and out on its wheeled rack. At no extra cost with a minimum \$60 stock order.

All the sales helps you need from AP



Your initial sales package will include a poster, a post card, an inspection tag, a decalcomania, classified ads, a catalog, and price sheets. Then AP mails direct to you a constant flow of additional sales aids and up-to-date price and catalog data.



Ads like this full-pager will be read by hundreds of *your customers and prospects*. They'll look for the sign of the AP Muffler Specialist.

THIS FREE SIGN IDENTIFIES YOU

Put it up where it will be seen. Let everyone know you are ready, willing and able to do the best muffler work in town.

THE **AP** PARTS CORPORATION
161 AP Building, Toledo 1, Ohio
Mufflers and Pipes • Miracle Power • dgf 123

BETTER-BREATHING ENGINES

Chilton's MOTOR AGE, MARCH, 1955



Record Sales and Crowds at Car Show

The 47th annual Chicago Automobile Show, which closed its doors at the International Amphitheatre recently after nine days, was the most successful selling show in the history of the Chicago motor classic, according to Edward L. Cleary, show manager and general manager of the Chicago Auto-

mobile Trade Association, sponsor of the spectacle.

"We made a survey of exhibit managers and salesmen in the 18 passenger car exhibits and the eight lines of trucks," said Cleary, "and every one reported sales much higher than last year's or any other year, and an unprecedented number of sales prospects. Attendance of 490,500 broke the old record of 481,000, it was announced by Show Chairman Jerry H. Cizek.

"Changing show dates to get them closer to release dates of new cars was one reason," said Cizek. "Another, we believe, has to do with the overall improvement and streamlining each make of car has been given. The trend to sports-type models and their racier, lower lines brought about a great deal of interest. We also feel that color has had a lot to do with the show's success. Gay colors used in 1955 models and the new color styling had considerable effect."



HERE'S YOUR CUE TO BIGGER PROFITS WITH RUSCO'S COMPLETE LINE

Rusco Fused Fabric—Blocksets—Lock-on

Rusco Pre-cemented Segments for Bonding

Rusco Clutch Facings

Rusco Ace Industrial Woven Roll Lining

Rusco Heavy-duty Brake Blocks

Rusco Industrial Friction Materials

The stage is set with Rusco's complete line. Watch for Rusco advertising in The Saturday Evening Post.



THE RUSSELL MANUFACTURING CO., MIDDLETOWN, CONN., U.S.A.

Time is an herb that cures all diseases. Benjamin Franklin

'Coast-to-coast service feature nets us extra sales..."

says **MR. EUGENE J. BRADY**, President of Brady-Frazer Co., Providence, Rhode Island, Chrysler-Plymouth dealer and past director of R. I. A. D. A.

TWENTY-FIVE years ago we were looking for *one* finance plan that could handle *all* phases of our business. We picked the COMMERCIAL CREDIT PLAN. Since then, not only has this Plan been able to cope with the many personal needs of our customers; but it gives them prompt, efficient service in any state in the Union. Each year the nationwide feature alone of COMMERCIAL CREDIT PLAN adds us extra sales."

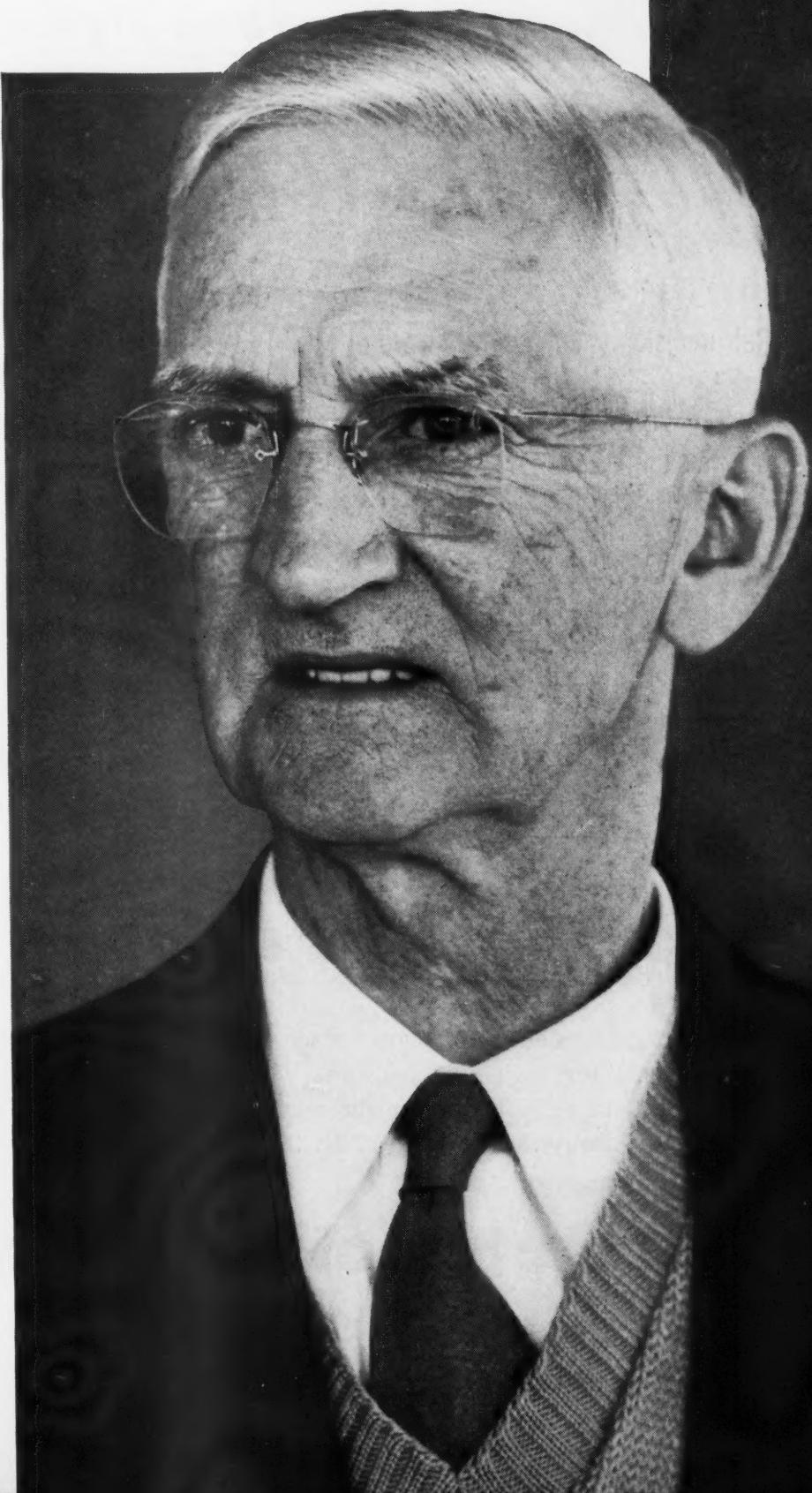
COMMERCIAL CREDIT DEALERS ARE Successful DEALERS

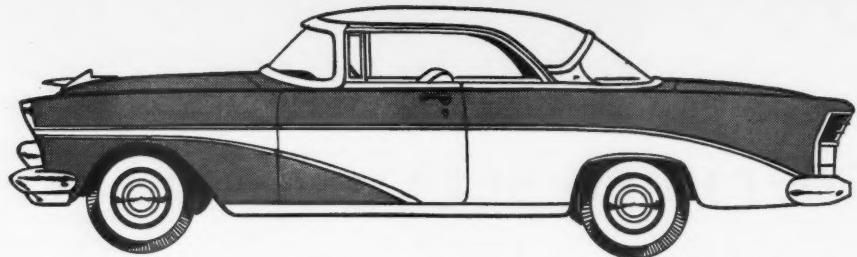
A letter or call to your nearest COMMERCIAL CREDIT PLAN office will get you speedy and expert help with your financing problems, too. Why not call today?



**COMMERCIAL
CREDIT
CORPORATION**

A service offered through subsidiaries of Commercial Credit Company, Baltimore... Capital and Surplus over \$170,000,000... offices in principal cities of the United States and Canada.





**Modern two-tone styling calls for
sharp, clean masking**

Get precision color separation with

REG. U.S. PAT. OFF.
SCOTCH
BRAND

Masking Tape!



Repainting flashy new cars—older cars too—calls for high-style two-tone work. To turn out perfect jobs use the masking tape that always holds tight . . . it's thin—

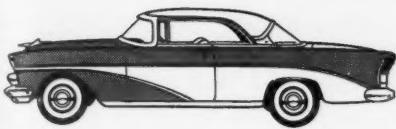
has less edge build-up . . . handles easily—cuts down your work . . . removes clean. Use famous "SCOTCH" Brand Masking Tape for *all* your repaint jobs.

3M Automotive Products

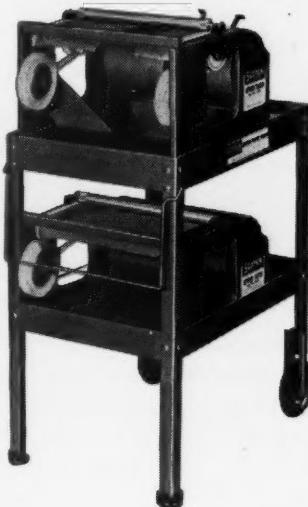
Order now from your 3M jobber



Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn.—also makers of "SCOTCH" Brand Pressure-Sensitive Tapes, "SCOTCH" Brand Magnetic Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.



**...and here's the
right Apron Taper
for two-tone
*masking!***



NEW "SCOTCH" BRAND MULTIPLE APRON TAPER (top unit on stand) delivers a choice of two widths of pre-taped aprons. Can be loaded either with 6" and 3" aprons or with 9" and 3" aprons. Combined with regular 12" "SCOTCH" Apron Taper (lower unit on stand) you've got the proper width aprons for neat, speedy masking of any area on any car.

REG. U.S. PAT. OFF.
SCOTCH
BRAND
APRON TAPERS
Order now from your 3M jobber



Plastics Laboratory Opens at Du Pont

A modern, completely equipped sales service laboratory to develop sound processing and design techniques for plastics was opened last month by Du Pont Co.'s Polychemicals Dept. The \$3 million installation is another segment of Du Pont's new research center growing up at Chestnut Run, near Wilmington, Del.

The Sales Service Laboratory will have as its primary objective assistance to customers calculated to reduce service problems. However, nearly half of its scheduled operations are concerned with development work on new materials and processes.

One of the most interesting sections in the laboratory is that containing equipment for the molding, extrusion, compounding, and forming of the thermoplastic resins produced by Du Pont. These include "Alathon" polyethylene resin, "Lucite" acrylic resin, "Teflon" tetrafluoroethylene resin, and "Zytel" nylon resin.

The laboratory has a variety of sizes and types of extrusion machines from a 1 1/4 in. extruder used chiefly in the coating of small-diameter wire, to a 4 1/2 in. machine capable of extruding heavy rigid sheeting. Auxiliary equipment includes radiant heaters, chill rolls, quench tanks, take-off equipment, and a film-slitting machine.

Injection molding machines range from one ounce to 16 ounce in size, and include a representative variety of types. Modern equipment, including a refrigeration unit, is used with the injection machines to regulate mold temperature.

Another interesting section of the laboratory contains an array of about 20 automobile engine blocks and radiators. These are used for testing the performance of engine coolants.

"*You say Jackson is our best salesman?"*

"*He sure is. A widow came in here to buy a suit to bury her husband in and he sold her one with two pairs of pants."*

**LEE...
the one
END LIFT
with ALL
the features!**



- Cantilever action delivers direct lifting power
- Double orifice valve eliminates surging
- Large Neoprene tires, roller bearing wheels for easier handling
- Pat. safety latch for positive locking
- Stores on end in minimum space

Save as much as 70% in job time; increase mechanic's efficiency to 50% with LEE, the original and best End Lift.

LEE Bead Breaker



Breaks both beads in one operation, with wheel on car, ground or tire changer. Air power does the work.

LEE Bumper Lift



Turns on a dime . . . lifts all U. S. cars . . . one hand control . . . Operates on 10 roller bearings for smooth up and down action with no binding or surging.

Write
for
Bulletin
201

**AUTOMOTIVE
EQUIPMENT
MFG. CO.**



11000 SO. ALAMEDA STREET
LYNWOOD, CALIFORNIA

35 Ways to Kill An Association

1. Don't come to the meeting.
2. But if you do come, come late.
3. If the weather doesn't suit you, don't think of coming.
4. If you do attend a meeting, find fault with the work of the officers and other members.
5. Never accept an office or com-

mittee appointment as it is easier to criticize than to do things.

6. Nevertheless, get sore if you are not appointed on some committee; but if you are, do not attend committee meetings.

7. If asked by the chairman to give your opinion regarding some important matter, tell him you have nothing to say. After the meeting tell everyone how things ought to be done.

8. Do nothing more than is absolutely necessary; but when other members roll up their sleeves and willingly and unselfishly use their ability to help matters along, howl that the association is run by a clique.

9. Don't bother about new members. Let the secretary do it.

10. When a banquet is given, tell everybody money is being wasted on blowouts which make a big noise and accomplish nothing.

11. When no banquets are given say the association is dead and needs a can tied to it.

12. Don't ask for a banquet ticket until all are sold.

13. Then swear you were cheated out of yours.

14. If you do get a ticket, don't pay for it.

15. If asked to sit at the speakers' table, modestly refuse.

16. If you are not asked, resign from the Association.

17. Hold back your dues as long as possible or don't pay at all.

18. If you don't receive a bill for your dues, don't pay.

19. When you do receive a bill for your dues postpone paying until the secretary writes for the money—then get sore because you've been dunned.

20. If you receive a bill after you've paid—resign from the association or at least suggest to some of the members that the Treasurer tried to work you or is manipulating the accounts.

21. Don't tell your association how it can help you, but if it doesn't help you, resign.

22. If you receive service without joining, don't think of joining.

23. If the association doesn't correct abuses in your neighbor's business, howl that nothing is being done.

24. If it calls attention to abuses in your own, resign from the association.

25. Always think and don't fail to talk about the "mote" in the other fellow's eye—never consider the "beam" in your own.

26. Keep your eyes open for something wrong and when you find it, resign.

27. At every opportunity threaten
(Continued on page 190)



PIN FITS Caused These

Piston Failures are Expensive . . . In Loss of Profit and Loss of Good Will

Many piston failures have been traced to incorrect Pin Fits which do not allow cam-ground pistons to expand properly, resulting in scored and broken pistons. Whether you fit your own pins or send the work out, we can help you eliminate practically all comebacks from piston scuffing and scoring.

Our 24-page booklet "Just What Is A Pin Fit" gives the complete story, with many illustrations of actual piston failures and their causes. Endorsed by piston, ring and car manufacturers—200,000 requests already filled—why not drop us a card for your own free copy.

See our exhibit at the Regional Shows in:
LOS ANGELES • SAN ANTONIO • ATLANTA
NEW YORK • DETROIT



**"The BIG PROFIT JOBS
Don't DRIVE IN...
They Are TOWED IN"**



HOLMES 525 Model

The new 525 model was designed for all-round road service and is capable of performing a wide variety of work. It has speed and flexibility for light work, with power and capacity for handling the average trucks. Each boom has a lifting capacity of 6 tons, a pulling capacity of 15 tons. The unit is fast, efficient and of moderate size for use on a 1½ or 2 ton truck.



HOLMES JUNIOR Model

This unit, although different in design and construction from the larger Holmes models, has many features that make it ideal for light pick-up, towing and delivery service. The Wrecker has a capacity of 3 tons and is capable of handling the average service call. It is light, easy to handle and economical to operate. Furnished either hand or power operated for mounting on any ½ to 1½ ton trucks.

. . . by SHOPS with NEW
HOLMES
Wrecker Equipment

Today no shop can afford to be without its own Modern Wrecker Equipment... *FIRST*, for service to its regular customers. *SECOND*, for those whom the shop hopes to obtain as new customers. Shops with up-to-date road units, such as shown, have little trouble holding on to regular customers or securing valuable new customers. The use of Holmes Equipment makes it possible for an operator to render complete 100% service. It enables him to go a long way to service customers and bring in jobs the shop could NOT otherwise obtain. Why be limited to drive-in customers when it is so easy to pick up new and profitable ones. REMEMBER, "The Big Profit Jobs Don't Drive-In, They are TOWED-IN" . . . by those who go after the business with new Holmes Wrecker Equipment. See your jobber or write factory today for model specifications and prices.

ERNEST HOLMES COMPANY
Chattanooga, Tennessee



SPRAYS A CLEAR, PROTECTIVE COATING INSTANTLY THAT

INSULATES [REDACTED] **WATERPROOF...**

- Ignition and Spark Plugs
- Battery Cables and Wiring
- Metal Trim and Accessories

also ideal for TV-RADIO antennas, parts and wiring...protects, woodwork, blueprints, etc.

A real timesaver for your own shop work—a proven money-maker as an add-on sales item—Champion Spray-on Plastic Sealer with crystal clear acrylic base serves countless uses in the automotive trade. Sprayon Plastic Sealer is high in dielectric strength—sprays on any surface—dries quickly to a non-tarnishing, flexible finish. Insulates ignition and wiring against short circuits and damaging corrosion...protects inside and outside chrome trim and accessories.

Available in handy 12-oz. aerosol can with patented non-clogging nozzle that takes only fingertip pressure for instant and sure application. This tool kit size container is popular with mechanics for on-the-job portability. Plastic Sealer also available in bulk with special Plastic Reducer.



NEW Display Material
Eye-catching, compact counter displays for your dealers. Ask about Champion Deal #500.

Champion also makes the complete line of 38 Sprayon automotive Enamels—also Aluminum, White and Black Lacquers that are gasoline and oil resistant—Zinc Chromate Primer to prepare metal for quick, easy touchup. See your jobber or write direct.

REPS—Some territories still available.

Champion Bronze Powder & Paint Co., Inc.
2101-2121 N. Elston Ave., Dept. MOTO, Chicago 14, Ill.

35 Ways . . .

Continued from Page 188

to resign and then get your friends to resign.

28. When you attend a meeting, vote to do something, then go home and do the opposite.

29. Agree to everything said at the meeting and disagree with it outside.

30. Always delay replying to communications from the association or better, don't answer at all.

31. When asked for information, don't give it, then.

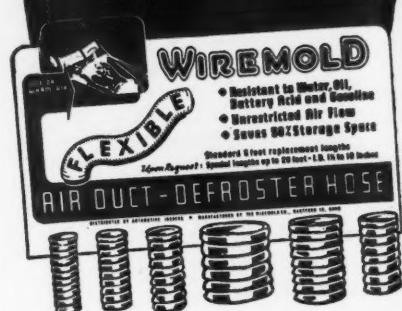
32. Cuss the association for incompleteness of its information.

33. Get all the assistance the association gives but don't give it any.

34. Talk co-operation for the other fellow with you; but never co-operate with him.

35. When everything else fails, cuss the secretary.

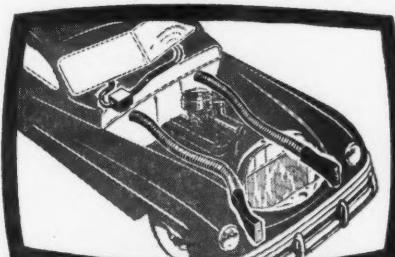
**This Display SELLS
WIREMOLD
Air Duct and
Defroster Hose
replacements
to your customers!**



Order this Wiremold AIR DUCT and DEFROSTER HOSE DISPLAY PACKAGE today... and bring in profits you're missing now. Contains one 6-foot length of each of the 6 most popular sizes — 1½", 1¾", 2", 2½", 3" and 4". The attractive 2-color display is FREE!

● ORIGINAL equipment on America's leading cars!

● BEST for replacements!



- Fits every make and model
- Easily bends 90° to 180°
- Easiest to cut and handle
- Very resistant to cold, heat, oil and water
- Saves 50% storage space — 6' lengths retract to 3' in package.

Write for full information.

THE WIREMOLD COMPANY
HARTFORD 10, CONNECTICUT

FLUSH OFF OLD PAINT RIGHT DOWN TO BARE METAL WITH A WATER HOSE & STRIPWASH

Latest Advance In Paint Stripping Research Slashes Hours Off Make-Ready Time. Modernizes Pre-Paint Procedure

An Important Message To The Body Refinisher

You, more than anyone else, know the tedious, costly hours of labor involved in sanding and scuffing a body prior to painting. Especially one with a finish that's crazed, pimpled, or loaded up with old paint.

There is no longer any need to put up with costly, old-fashioned methods of preparation.

Here is news of a product named STRIPWASH. It is a product so dramatically effective it will change all your ideas about pre-paint procedure.

STRIPWASH—The Time Saving Way

Now you can flush off old body paint—every last trace of it—with a water hose—and STRIPWASH. Wash it off, right down to gleaming bare metal. And get a body that's grease free, residue free, completely neutral. Ready for immediate refinishing in the barest fraction of the time required by old methods.

HOW STRIPWASH WORKS

STRIPWASH is sprayed or brushed onto the entire surface to be stripped. It starts to work in a matter of minutes with a unique three-way action. (1) It digests auto paint from the top down. (2) It de-bonds it from the bottom up. (3) It converts it into a soap emulsion that rinses off cleanly upon contact with water. No scrubbing, no scraping, no solvent neutralizing required.

CUT LABOR COST TO THE BONE

With just 2½ gallons of STRIPWASH you can strip the average auto body down to bare metal within 30 minutes to 3 hours, depending upon the number of coats to be removed. STRIPWASH is readily applied by unskilled help. Then it works by itself. Shop help is freed for more productive work in the interim. Time studies show the use of STRIPWASH reduces pre-paint labor cost by 75%.

QUICK, DOWN-TO-METAL PENETRATION

One application of STRIPWASH will penetrate upwards of 15 coats of automotive paint without replenishment. It stays alive until it's done the job—the complete job. Yet you can let it remain on a body for days without washing it off. The paint will never harden or reset.

STRIPWASH is effective indoors or out. Does not thin out or weaken with age. It will not run off curved, vertical, or inverted surfaces. It is non-inflammable, non-toxic.

Let STRIPWASH Magic Work For You

When you adopt STRIPWASH as basic procedure you'll save dollars and hours every time you use it. In addition, every finish you turn out will be an ORIGINAL finish—yours from the metal up. No aging paint under it to jeopardize the quality of your own craftsmanship.

TRY IT. RESULTS GUARANTEED

Order a trial gallon today. Better still a 5 gallon can for your next two paint jobs. You must be completely satisfied or your money back.

If your jobber doesn't yet stock STRIPWASH use the coupon below. Then ask him to ask us.

Write for illustrated brochure A

STRIPWASH CORPORATION
11 Park Place
New York 7, N. Y.

Please Ship us 1 gal. can(s) STRIPWASH at \$4.25

..... 5 gal. can(s) STRIPWASH at \$3.95/gal (\$19.75)
Shipped prepaid if remittance accompanies order.
Satisfaction guaranteed or money back.

Firm Name

Address

City Zone State

Send Brochure



PLEASED WITH THE PERSONALIZED SERVICE system at Ivy-Russell Motor Company, Houston, Texas, are Weldon Wells, assistant service manager (left), a customer (center), and mechanic Herb Ferguson. The plan permits the customer to select any mechanic the firm employs to service his car. If he likes the man's work the

customer may continue to have him handle any future jobs. If he is not satisfied, he can change mechanics. Ivy-Russell believes that if a customer has developed confidence in the mechanic that works on his automobile, he is more willing to cooperate with him and understand the mechanic's problems as well as his own.

AMC Looks for Sales Increase This Year

Although American Motors was late in introducing the 1955 line of Nash and Hudson cars, it is looking for a 25 per cent increase in sales for the fiscal year ending next Sept. 30.

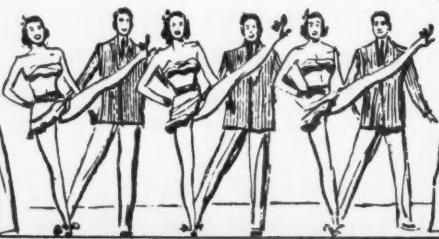
This would indicate a sales goal of about 170,000 cars this fiscal year, since sales of Hudson and Nash automobiles in the 12 months ended Sept. 30, 1954, totalled 135,794.

Station Wagon Hit Peak Last Year

Station wagons continue their steady gain in popularity. Production last year hit 364,234, an all-time high, up substantially over the 318,178 units produced in 1953. The number of station wagons built on truck chassis is dropping off, accounting for 14,784 last year compared with 21,000 in 1953.

WHAT'S NEW?

MORE
SERVICE ITEMS
by
CHAMP-ITEMS



Good news is always coming from Champ-Items, with new service items, short cuts to help you lick tough service problems. Here are two more you will go for!

No. 105 Spring Shackle Oversize Stud Assembly for rear spring front hanger for Ford 1949-54 and Mercury 1952-55. The rear spring front hanger on Ford and Mercury cars is welded or riveted to the frame. When the stud holes are worn, a new stud will not correct the wear in hanger. To eliminate replacing hanger simply install Champ-Items No. 105 Tapered Oversize Stud.

List \$1.00 each.



No. 109 Idler Arm Take-Up Kit for late model cars — provides proper tension, eliminating idler arm looseness and noise. Helps keep toe-in setting accurate for easier steering. Assembly consists of oil-resisting rubber grease retainer, compression spring, thrust washer and cup.

List \$1.00 per kit.



Write for our latest catalog.

ORDER FROM YOUR JOBBER

CHAMP-ITEMS, INC.

6191 Maple Ave.

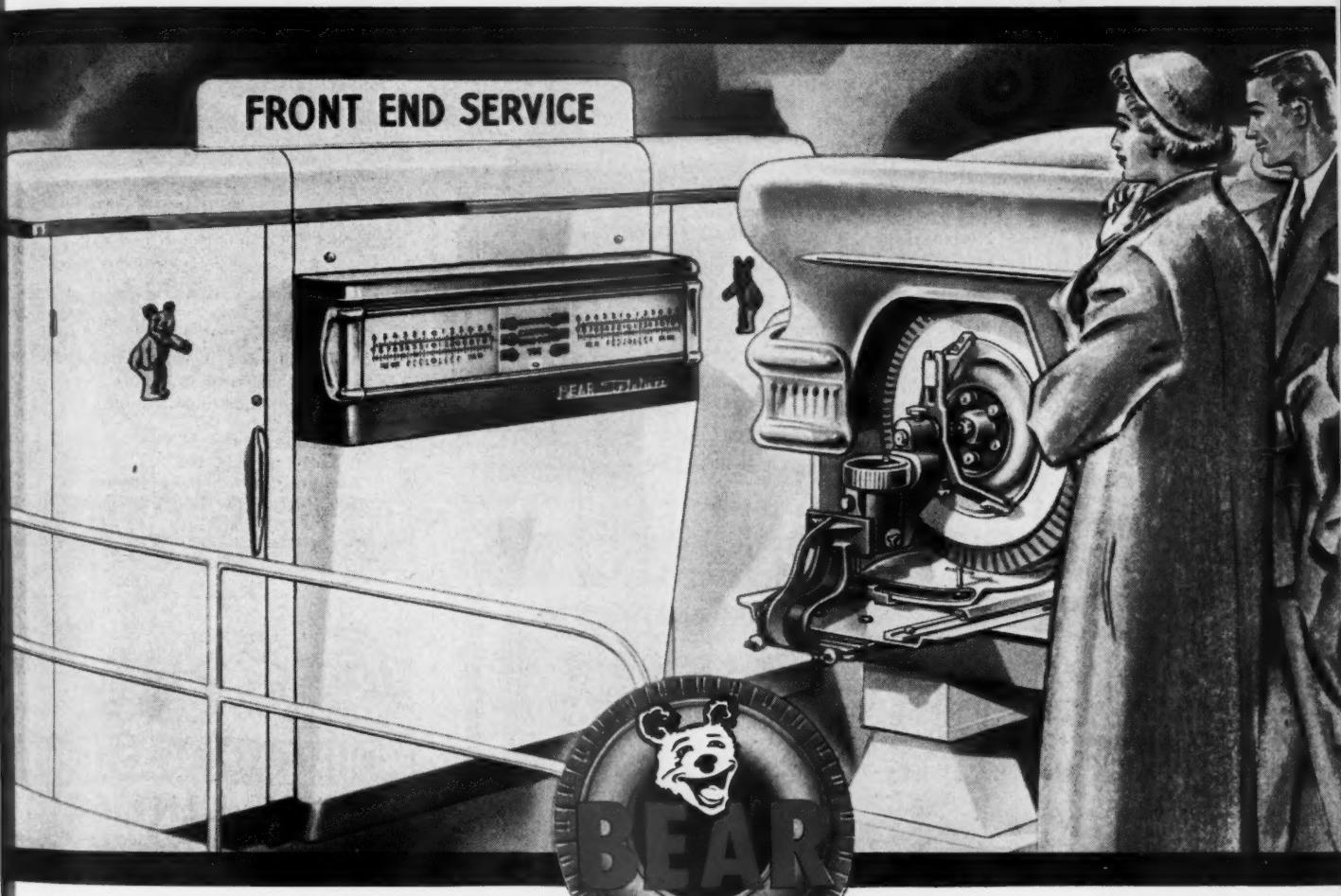
St. Louis 14, Mo.



now Telaliner with the new ADVANCED LOOK

styled in the spirit of the
1955 CARS

for the operator who desires to offer
the FINEST WHEEL ALINEMENT SERVICE for
extra Profit and outstanding Prestige.



NEW Telaliner®

FREE...BEAUTIFUL TELALINER BROCHURE!

The realism of Full Color Puts Telaliner **right before your eyes!**



right before your eyes...THE FULL BEAUTY OF TELALINER!

right before your eyes...THE SIMPLICITY OF TELALINER!

right before your eyes...THE ACTUAL TELALINER SCREEN—BIG AND CLEAR AS TV! right before your eyes...THE MANY CONVENIENCE FEATURES OF TELALINER!

right before your eyes...THE TRUE SHOWMANSHIP

(please attach this coupon to your letterhead)→

BEAR MFG. CO., DEPT. M-1, ROCK ISLAND, ILL.

I want to take a closer look at the FINEST IN WHEEL
ALINEMENT SERVICE! Please send me, without cost
or obligation, the big, four-color TELALINER Brochure.

THAT HELPS YOU SELL MORE TELALINER JOBS!

Copyright 1955 Bear Mfg. Co.

Calendar of Coming Events

Dealers Conventions

- June 19-21 — Michigan Automobile Dealers Assn., Grand Hotel, Mackinac Island, Michigan.
- Aug. 21-23—22nd Annual Convention, Automobile Dealers Assn. of West Virginia, Greenbrier Hotel, White Sulphur Springs, West Virginia.
- Sept. 16—Nebraska New Car Dealers Association, Paxton Hotel, Omaha.
- Sept. 16—24th Annual State Convention, Kansas Motor Car Dealers Assn., Broadview Hotel, Wichita, Kansas.
- Sept. 16-17—New Mexico Automotive Dealers Assn., Nickson Hotel, Roswell, N. M.
- Sept. 18-20—32nd Annual Convention, New York State Automobile Dealers, Inc., Saranac Inn, Saranac, N. Y.
- Sept. 19—Minnesota Automobile Dealers Association, Radisson Hotel, Minneapolis.
- Sept. 25-27—Texas Automotive Dealers Assn., Shamrock Hotel, Houston, Texas.
- Sept. 28-30—37th Annual Convention, New Jersey Automotive Trade Assn., Hotel Chalfonte-Haddon Hall, Atlantic City, N. J.
- Oct. 9-10—Georgia Automobile Dealers Assn., Bon Air Hotel, Augusta, Ga.
- Oct. 16-18—National Used Car Dealers Association, Hotel William Penn, Pittsburgh, Pa.

Nov. 1 — Connecticut Automotive Trades Assn., 34th Annual Convention, Hotel Statler, Hartford, Conn.

Nov. 13-14—20th Annual Convention, Auto Dealers Assn. of Alabama, Tuttler Hotel, Birmingham, Ala.

Automobile Shows

- March — Lewiston Automobile Show, Lewiston Armory, Lewiston, Maine.
- March — Spokane Automobile Show, Spokane Coliseum, Spokane, Washington.
- March 16-20—Winnebago County Automobile Show, Army, Rockford, Illinois.
- March 29-Apr. 3 — Sacramento Auto Show, Civic Auditorium, Sacramento, Calif.
- April 20-23—Danville Auto Show, Danville, Virginia.

General

- Mar. 16-18 — 11th Annual Canadian Automotive Service Show, Automotive Bldg., C. N. E. Grounds, Toronto, Canada.

The automobile industry uses almost \$80 million worth of cotton in its products in one year.

KEN-SPEED DUAL-PURPOSE BEAD EXPANDER FOR TUBELESS TIRES

Services both auto and truck tires! Every tire repair man needs this powerful, positive, fast-acting tool. Safer, easier to use. Built extra strong for longer life. You can't buy better . . . you can't afford less! For your protection, insist on Ken T-130.



Seats bead with a few strokes. FAST . . . SAFE!

Powerful enough for Tubeless Truck Tires!

Retail \$9.90

WHY BUY TWO?

Ken-Speed Bead Expander is the only tool with the extra power to service both auto and truck tube less tires.

IF IT'S A KEN, IT'S BETTER
See your automotive jobber

The KEN-TOOL Mfg. Co.
AKRON 5, OHIO

THINGS YOU CAN DO
FASTER-EASIER with

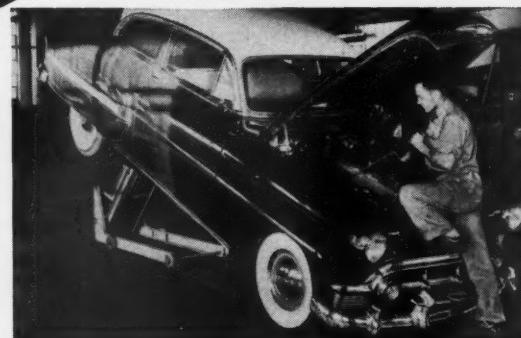
for engine work on today's wide-fender cars simply raise rear end with BAY-LIFT and go to work



- Portable, pneumatic, one-end lift
- Raises either end of car, 0" to 50" in 10 sec.
- Holds at any convenient working ht.
- Goes anywhere an air hose will reach
- Rugged, dependable, service-free
- Doesn't extend beyond car, stores in 27" sq.
- Double safety lock, exclusive 4-way suspension

WIN \$5—Tell us how you use BAY-LIFT! We'll pay \$5 for any idea used in our future advertising. Entries become property of Bay. Judges' decision final. Offer ends Dec. 30, 1955.

BAY-LIFT



BAY BUMPER JACK

AIR OPERATED . . . drops wheels clear of deep rear fenders
Hinged-type (54" lifting bar, closes to 24" wide for between-car maneuverability) . . . Standard-type. Priced from \$99.95

BAY MANUFACTURING CO.

Dept. MA, Box 608, Harbor City, Calif.
Warehouses: Boston & Philadelphia
OVERSEAS DIV.: 276 W. 43rd St.
New York 36, N.Y.

ASK YOUR JOBBER FOR
FREE BAY DEMONSTRATION

Lasco
SINCE 1908
See this ad in a 1000 places
MOUNTAIN MASTER
BRAKE LINING
America's Finest!

From Hollywood to Manhattan — Demanded by Fine Car, Bus and Heavy Transportation Owners. Get the BEST for a Few Cents More. Cut Costs — Prevent Accidents — Save Lives! Dealer inquiries are invited. Write or wire.
LASCO BRAKE PRODUCTS CORP. MEMPHIS 3, TENN. OAKLAND 7, CALIF.

BOWERS BATTERIES

Always Better

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

A NEW LEECE-NEVILLE ALTERNATOR SYSTEM THAT ACTUALLY COSTS LESS THAN "EXTRA" OUTPUT D. C. GENERATORS!

TYPICAL
LEECE-NEVILLE QUALITY
THROUGHOUT

NEW SIMPLIFIED
BRACKETING
MAKES
INSTALLATION
EASY

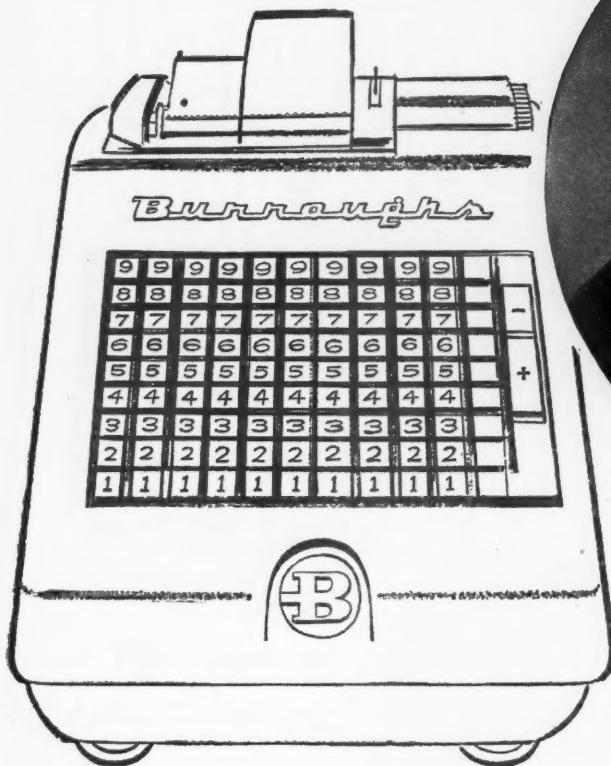
BOTH 6-VOLT and
12-VOLT MODELS
for passenger
cars and trucks

- ALL the famous
advantages of
L-N Alternators,
including...
- AMPLE OUTPUT FOR ACCESSORIES
 - CHARGING CURRENT
WITH ENGINE IDLING
 - LOW MAINTENANCE COST

Write, wire or phone today for full details and
the amazing low price. The Leece-Neville Company,
Cleveland 14, Ohio. Distributors in principal cities . . . service stations everywhere

YOU CAN
RELY ON . . .

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Neville ALTERNATORS
Proved by performance
for over 9 years



**J. S. Coleman, President
Burroughs Corporation**

"Business Publications are essential tools of management"

"To keep abreast of rapidly developing techniques in all areas of business operations," says Mr. Coleman, "is not an easy task. Yet, if management is to discharge the responsibilities laid upon it, it must be informed both of technical developments and, indeed, of events and trends of the nation as a whole."

"Without business publications," Mr. Coleman adds, "the job would be impossible. As the size and complexity of the job have grown, management has come to depend increasingly on business publications for information necessary to sound judgment."

When editorial pages are read with eagerness, advertising pages in those same publications have equally high specialized value. They provide a direct sales route for any product or service of benefit to business or professional men.



NATIONAL BUSINESS PUBLICATIONS, INC. 1001 Fifteenth Street, N. W., Washington 5, D. C. • STerling 3-7535

The national association of publishers of 165 technical, professional, scientific, industrial, merchandising and marketing magazines, having a combined circulation of 3,849,056...audited by either the Audit Bureau of Circulations or Business Publications Audit of Circulation, Inc....serving and promoting the Business Press of America...bringing thousands of pages of special-

ized know-how and advertising to the men who make decisions in the businesses, industries, sciences and professions...pin-pointing your audience in the market of your choice. Write for list of NBP publications and the latest "Here's How" booklet, "How We Use the Business Press and Why" by William C. Sproull, Director of Advertising of the Burroughs Corp., Detroit.



DRESS THOSE POINTS WITH RIMAC *Flex-Stone*

Made of the hardest abrasive materials pressed into a flexible core, Rimac Flexstone cuts Tungsten or Platinum Iridium easily—reaches hard-to-get-at corners readily.

Flexstone is a non-conductor. You can dress a commutator, motor running—without short circuiting.

Standard Flexstone for contact points; Extra Thin and Fine for voltage regulators and softer points.



Ask your jobber or write for literature.

**RINCK-McILWAINE
INC.**

16 HUDSON STREET, NEW YORK 13, N. Y.

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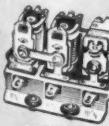
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CONDENSERS



VOLTAGE REGULATORS

PEEDEE SAYS:
"You Can't Beat
**PRECISION
and
DEPENDABILITY**
And That's What
P & D STANDS FOR!"

When you come to decide which parts to feature let reputation be your guide.

For over 35 years P & D has been known throughout the industry for Precision in manufacture and Dependability in quality. That adds up to customer satisfaction and more business for you. Look into it!

P & D MANUFACTURING CO., INC.

Established 1920

19-02 Steinway Street, Long Island City 5, N. Y.



Chilton's MOTOR AGE, MARCH, 1955

TUBELESS TIRE TOOLS

The Original MAY'S — AIR OPERATED

BEAD EXPANDER

SIZES
UP TO
8.20 x 15



ONLY
\$17.95

'Fast — Easy to Use — Safe! Works on your air hose. For both "Safety" and conventional tubeless tire rims. Approved by automotive and tire manufacturers. Automatic feature prevents injuries from band breaking. GUARANTEED ONE YEAR!

"Little Giant" Portable

AIR OPERATED TIRE SPREADER



ONLY
\$29.75

Ideal for shop or field On-The-Spot repair. Cannot harm tubeless tire beads. Spreads tire 11 1/4 inches permitting use of "C" clamps. Works on your air hose . . . one hand operation . . . turn tire in any position to inspect . . . weighs 9 1/2 lbs. For passenger or truck tires. GUARANTEED ONE YEAR!

Order Yours Now from your Jobber, or Direct

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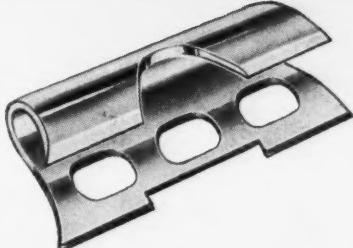
CASH WITH ORDER

MAY BROTHERS

MANUFACTURING COMPANY, INC.
P.O. BOX No. 304
LANSING, MICHIGAN

NEW! *Snugl*
WHEEL WEIGHT CLIP

- Our New SNUGL Spring Steel Clip is contoured to fit the rim . . . the only tailor made clip on the market.



SNUGL'S New Tubeless Tire Clip

Our New Snugl Clip has been used for many months and proved OK by Tubeless Tire Manufacturers. Dovetailed on both ends, inside and outside of the lead to hold weight firmly with a Bull Dog grip.

Snugl Wheel Weights are recognized as the "Standard of the Trade," designed right and made right to give a Better Fit, Better Balance, Finer Appearance and Easier Application.

*Write for our New 4 page Brochure and
the name of your nearest Jobber.*

Snugl WHEEL WEIGHT MFG. CO.

Division of Mid-Western Auto Parts
KOKOMO, IND. MANUFACTURERS EXCLUSIVELY

WHITTIER, CAL.



The Market and The Profit In Body Work

Whether or not you are already aware of the tremendous profits to be gained from automotive body work, we predict that you will be tremendously interested in the forthcoming JUNE issue of MOTOR AGE.

It will outline and feature the ever-increasing opportunities in body shop work, including a lead editorial, "Body Work—How 'Green' Is My Volume?"—and a special feature on cultivating body work sales, entitled, "It Isn't Polite to Point, but It's Profitable."

And there will be a Modern Body Shop Layout, an article on Equipment and Tools Needed, plus a lesson on how to estimate and sell body work.

Featured In MOTOR AGE In June A Practical Body Shop Guide

With its BODY SHOP department, MOTOR AGE pioneered, leading the way for the automotive business press into this fertile field of maintenance profits.

Every month—month after month, year after year—MOTOR AGE has had its well-defined and highly specialized BODY SHOP Department, and its terrifically popular "Body Shop Hints."

Now, in the coming JUNE issue, MOTOR AGE is going a step further with its "Practical Body Shop Guide."

In this section you will find data on:

Preparing the Work
Dinging and Straightening
Painting and Masking

Trim and Upholstery Repair
Sealing Body Leaks
Window and Regulator Service

Panel Replacements
Customizing, etc.

This will be a special BODY SHOP reference number—a made-to-order guide to profits from jobs that have to do with automobile or truck body servicing.

Don't miss the MARKET or the PROFIT in Body Work

Watch for the June issue of . . .

MOTOR AGE

A CHILTON Publication

Chestnut & 56th Sts.



Philadelphia 39, Pa.

they're goin' wild
SIMPLY WILD over the **NEW**
StyleMaster
KAR-RUGS



THE WOOSTER RUBBER CO.
 WOOSTER, OHIO

The PIONEER Tool
 FOR INSTALLING VALVE SEAT RINGS

The Biggest
 Seller



THE FIRST . . . and still the MOST POPULAR,
 MOST PRACTICAL, SIMPLEST, MOST UNI-
 VERSAL tool of its kind made.

EVERLASTING . . . the first tools made over
 25 years ago are still in service.



K.O. LEE CO.
 ABERDEEN, SOUTH DAKOTA
If it's made by Lee it's a "Knock-Out"



**FASTEST, MOST ACCURATE
 TESTING DEVICE MADE**
Auto-Test
"AUTO-TONG"

(Pat. Pending)

It's an AMMETER—It's a VOLTMETER! And FAST! Checks complete electrical system of car or truck IN SECONDS . . . without disconnecting a single wire. Complete with metal case. GUARANTEED FOR FULL YEAR!

- Laminated steel yoke snaps around conductor
- Gives instant, fully-visible reading
- Accurate within 2% of full scale
- Takes large overloads without burnout

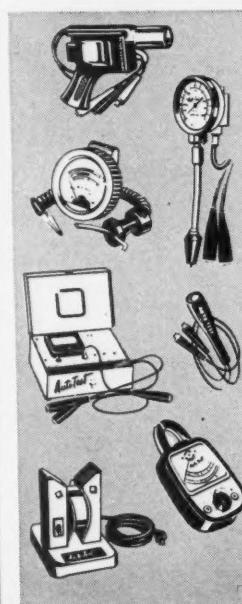


make **Auto-Test**
ELECTRICAL TESTING EQUIPMENT

YOUR FIRST CHOICE

EXCLUSIVE EXTRA FEATURES help you make electrical tests quicker, easier and with greater accuracy. No wonder shopmen are "sold" on every Auto-Test specialty in this famous, ever-growing line. Make Auto Test your choice for year 'round, extra service!

Contact your jobber
 or write direct.



Auto-Test INCORPORATED
 600 South Michigan Avenue • Chicago 5, Ill.

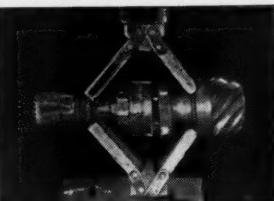
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BB PINION GEAR SPLINE ASSEMBLY
RAPID
R - E - M - O - V - E - R
FOR CHEVROLET AND BUICK



Save Time Save Work Save Money \$1945 PREPAID IN U.S.A.
Used simply with press or large vise Charges Added If C.O.D.
DEPT. A
BEAULOYE BROS. ENGR. CO., 1344 BROADWAY, SAN DIEGO 2, CALIF.

For Best Results
With WHITE WALL CLEANERS
use the

IDICO PISTOL TYPE SPRAYER

This amazing New Idico Sprayer does the job "like Magic" with its . . . Trigger operating high pressure. Hydraulic piston . . . Developing controllable fine fog spray for thorough and uniform coverage of any area. The sprayer that sells your product.

Retails for \$10.25—Write for Trade Discounts

IDICO PRODUCTS CO., Dept. MA, 3 West 125th St., New York 27, N. Y.



Territories
Open For
Active
Distributors

Classified Advertisement

WINDSHIELD-WIPER CABLE REPAIR KIT line—for sideline agents. Packed in half & whole dozen units—Dealer cost \$5.68 dozen. Your return better than 100%. Now selling at gas stations, garages. Dealerships. Territories available. Write for details, samples. The Ark Products Co., P. O. Box 24, Kingston, N. Y.

MOTOR AGE



The Quality Magazine

of the Automotive

After-Market

JUST THE CARBURETOR PARTS YOU NEED FOR TOP TUNE UP

CPA 100 — durable metal cabinet serves as a display, or as a storage cabinet. Cover can be closed and locked.

HYGRADE TOP TUNE UP MERCHANDISER

Gasket Packets, Needles and Seats, Pump Piston Plungers—the parts you need for a simple overhaul or a complete rebuilding job—partitioned with index cards and labels so you can find the right part in an instant. Plenty of room for more numbers and/or additional stock. All parts are individually packaged so there's no waste.

*Write for catalog sheet HF491
describing special price offer, free dealer helps.*

HYGRADE PRODUCTS DIVISION

Standard Motor Products, Inc.
37-18 Northern Blvd.,
Long Island City 1, N. Y.



The Last Laugh



The reason ministers never buy second-hand cars is that they don't have the vocabulary to run them.

Service Manager: "I'll bet you were mad when you ran over that skunk."

Customer: "Mad? I was highly incensed."

A traveling salesman ran out of gas one evening on a lonely road and asked at the only farmhouse in sight:

"Can you put me up for the night?"

"I reckon I can," said the farmer, "if you don't mind sharing a room with my young son."

"Good heavens," gasped the salesman, "I'm in the wrong joke."

A new girl in the dealer's office was told, "You'll like it here—lots of opportunities for advances."



AUTO PARTS



The following verse isn't original, but we thought we'd publish it because it somehow relieves our feelings:

The typographical error is a slippery thing and sly,

You can hunt till you are dizzy, but it somehow will get by.

Till the forms are off the presses, it is strange how still it keeps;

It shrinks down in a corner and it never stirs or peeps,

That typographical error, too small for human eyes,

Till the ink is on the paper, when it grows to mountain size.

The remainder of the issue may be as clean as clean can be.

But that typographical error is the only thing you see.

The new teacher said: "I want you all to be so quiet you can hear a pin drop."

There was complete quiet for a few seconds, then a voice from the rear broke the silence: "Let 'er drop."

A wife suddenly walked into the office where her husband sat with his secretary on his lap. Without hesitation the husband dictated: "Dear Sir, shortages or no shortages, I simply cannot conduct the affairs of my office any longer with just one chair."

A boy burst into the neighbor's living room, calling out: "Mr. Smith, my daddy sent me over to borrow your bottle opener."

The neighbor directed the lad to the door with: "Run right along home, sonny, I'll bring it right over."



Now 2 Exclusive Reasons why you Profit most with Ramco



EXPANDER-SPACER COMBINATION

In C-9 you get the New Circumferential Expansion Principle you need for best results in re-ring the new '55 type engines! In addition, you get Ramco's new Duomatic action! Combined into one ring are both the functions of the expander and the spacer rings. The dual action of this ring brings you many important advancements in ring performance. It puts you years ahead with oil control results that are sensationaly superior . . . and superior jobs always mean more profits for you!*

The C-9 Oil Ring



Spiro-Seal NO GAP STEEL RING

Only with 10-Up rings can you give your re-ring customers the proven performance advantages of No Gap Spiro-Seal construction. Spiro-Seal has many exclusive patented features. One of them is Alternating Pressure action. This action provides increased pressure on the downstroke to control oil. It automatically decreases its pressure on the upstroke to provide proper lubrication. This is one of many principles that make the Ramco 10-Up oil ring a truly all-purpose ring.*

The 10-Up Oil Ring

Circumferential Expansion
as embodied in the new C-9 ring proves again
the Engineering Leadership of

RAMCO

PISTON RINGS



for today's Re-Ring Jobs

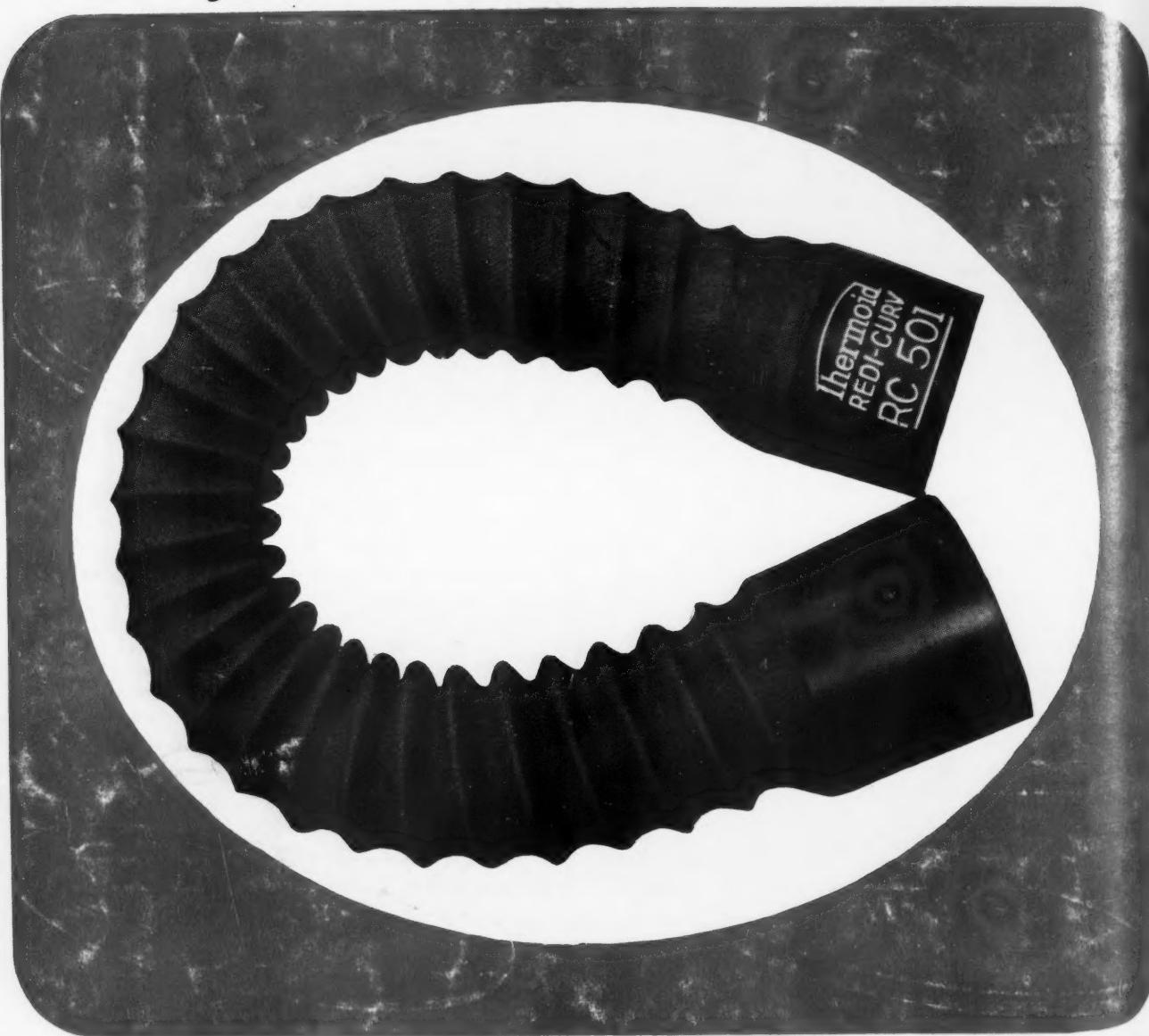


RTC for Fleet Re-Ring Jobs



G for the New Type Engine Re-Ring Jobs

make your next connection with REDI-CURV!



Thermoid Redi-Curv Radiator Hose makes hard-to-fit connections much simpler and quicker. Amazing flexibility and smooth, tapered ends make Redi-Curv a snap to install in any car... saves time and skinned knuckles. There's no cutting, no waste. 20 stock sizes fit popular passenger cars.



Thermoid Straight and Curved Radiator Hose

Redi-Curv absorbs motor vibration... won't pull, strain or break connections. Coiled wire reinforcement gives it added strength... prevents collapse. Neoprene tube withstands all radiator chemicals. Tough cover resists aging and cracking. Get Redi-Curv from your Thermoid jobber now!



Thermoid Company • Trenton, New Jersey

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment.